

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	17478	oligosaccharide\$1 or lacto-n-neotetraose or LNNt or poly lactosamine	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 14:09
L2	3601	1 near8 (synthes\$8 or produc\$8)	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 15:14
L3	601	2 same (coli or bacter\$ or microb\$10 or microorganism\$)	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 15:13
L4	26	3 same vivo	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 14:59
L5	221	2 near5 (coli or bacter\$ or microb\$10 or microorganism\$)	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 15:15
L6	2513	1 near3 (synthes\$8 or produc\$8)	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 15:15
L7	151	6 near5 (coli or bacter\$ or microb\$10 or microorganism\$)	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 15:16
L8	136	3 and (glycosyltransferase\$1 or glycosyl transferase\$1)	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 15:17
L9	27	7 and (glycosyltransferase\$1 or glycosyl transferase\$1)	US-PGPUB; USPAT	ADJ	OFF	2005/04/06 15:17

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 16:04:16 ON 06 APR 2005

=> fil .bec

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 16:04:27 ON 06 APR 2005
ALL COPYRIGHTS AND RESTRICTIONS APPLY. SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s oligosaccharide# or lacto n neotetraose or LNnT or polylactosamine

FILE 'MEDLINE'

24766 OLIGOSACCHARIDE#

805 LACTO

712363 N

108 NEOTETRAOSE

104 LACTO N NEOTETRAOSE

(LACTO(W)N(W)NEOTETRAOSE)

17 LNNT

185 POLYLACTOSAMINE

L1 24873 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMI
NE

FILE 'SCISEARCH'

26940 OLIGOSACCHARIDE#

682 LACTO

1151362 N

109 NEOTETRAOSE

102 LACTO N NEOTETRAOSE

(LACTO(W)N(W)NEOTETRAOSE)

18 LNNT

193 POLYLACTOSAMINE

L2 27081 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMI
NE

FILE 'LIFESCI'

6298 OLIGOSACCHARIDE#

195 "LACTO"

216647 "N"

47 "NEOTETRAOSE"

47 LACTO N NEOTETRAOSE

("LACTO"(W)"N"(W)"NEOTETRAOSE")

7 LNNT

40 POLYLACTOSAMINE

L3 6348 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMI
NE

FILE 'BIOTECHDS'

3166 OLIGOSACCHARIDE#

60 LACTO

44703 N

13 NEOTETRAOSE

13 LACTO N NEOTETRAOSE

(LACTO(W)N(W)NEOTETRAOSE)

4 LNNT

6 POLYLACTOSAMINE

L4 3175 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMI
NE

FILE 'BIOSIS'

- 23136 OLIGOSACCHARIDE#
- 2953 LACTO
- 855592 N
- 105 NEOTETRAOSE
- 102 LACTO N NEOTETRAOSE
- (LACTO (W) N (W) NEOTETRAOSE)
- 17 LNNT
- 185 POLYLACTOSAMINE
- L5 23308 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

FILE 'EMBASE'

- 17894 OLIGOSACCHARIDE#
- 721 "LACTO"
- 689143 "N"
- 102 "NEOTETRAOSE"
- 96 LACTO N NEOTETRAOSE
- ("LACTO" (W) "N" (W) "NEOTETRAOSE")
- 15 LNNT
- 160 POLYLACTOSAMINE
- L6 18027 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

FILE 'HCAPLUS'

- 48931 OLIGOSACCHARIDE#
- 1336 LACTO
- 2786323 N
- 181 NEOTETRAOSE
- 175 LACTO N NEOTETRAOSE
- (LACTO (W) N (W) NEOTETRAOSE)
- 33 LNNT
- 207 POLYLACTOSAMINE
- L7 49094 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

FILE 'NTIS'

- 156 OLIGOSACCHARIDE#
- 5 LACTO
- 69322 N
- 1 NEOTETRAOSE
- 1 LACTO N NEOTETRAOSE
- (LACTO (W) N (W) NEOTETRAOSE)
- 0 LNNT
- 1 POLYLACTOSAMINE
- L8 158 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

FILE 'ESBIOBASE'

- 7730 OLIGOSACCHARIDE#
- 231 LACTO
- 299222 N
- 63 NEOTETRAOSE
- 60 LACTO N NEOTETRAOSE
- (LACTO (W) N (W) NEOTETRAOSE)
- 12 LNNT
- 98 POLYLACTOSAMINE
- L9 7822 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

FILE 'BIOTECHNO'

- 9517 OLIGOSACCHARIDE#
- 275 LACTO
- 184936 N

53 NEOTETRAOSE
 52 LACTO N NEOTETRAOSE
 (LACTO(W)N(W)NEOTETRAOSE)
 8 LNNT
 113 POLYLACTOSAMINE
 L10 9603 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

FILE 'WPIDS'

5998 OLIGOSACCHARIDE#
 415 LACTO
 671221 N
 15 NEOTETRAOSE
 14 LACTO N NEOTETRAOSE
 (LACTO(W)N(W)NEOTETRAOSE)
 11 LNNT
 14 POLYLACTOSAMINE
 L11 6008 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

TOTAL FOR ALL FILES

L12 175497 OLIGOSACCHARIDE# OR LACTO N NEOTETRAOSE OR LNNT OR POLYLACTOSAMINE

=> s 112(5a) (synthes? or produc?)

FILE 'MEDLINE'

475770 SYNTHES?
 1221601 PRODUC?
 L13 1818 L1 (5A) (SYNTHES? OR PRODUC?)

FILE 'SCISEARCH'

843415 SYNTHES?
 1691626 PRODUC?
 L14 3226 L2 (5A) (SYNTHES? OR PRODUC?)

FILE 'LIFESCI'

135983 SYNTHES?
 488487 PRODUC?
 L15 757 L3 (5A) (SYNTHES? OR PRODUC?)

FILE 'BIOTECHDS'

31207 SYNTHES?
 208643 PRODUC?
 L16 1180 L4 (5A) (SYNTHES? OR PRODUC?)

FILE 'BIOSIS'

625240 SYNTHES?
 1625530 PRODUC?
 L17 2824 L5 (5A) (SYNTHES? OR PRODUC?)

FILE 'EMBASE'

581651 SYNTHES?
 1170204 PRODUC?
 L18 1755 L6 (5A) (SYNTHES? OR PRODUC?)

FILE 'HCAPLUS'

1438196 SYNTHES?
 4013799 PRODUC?
 865295 PRODN
 4435297 PRODUC?
 (PRODUC? OR PRODN)
 L19 6900 L7 (5A) (SYNTHES? OR PRODUC?)

FILE 'NTIS'

```

        42005 SYNTHES?
        364086 PRODUC?
L20      21 L8 (5A) (SYNTHES? OR PRODUC?)

FILE 'ESBIOBASE'
        180134 SYNTHES?
        525757 PRODUC?
L21      1012 L9 (5A) (SYNTHES? OR PRODUC?)

FILE 'BIOTECHNO'
        170699 SYNTHES?
        394590 PRODUC?
L22      1016 L10 (5A) (SYNTHES? OR PRODUC?)

FILE 'WPIDS'
        122861 SYNTHES?
        2211377 PRODUC?
L23      795 L11 (5A) (SYNTHES? OR PRODUC?)

TOTAL FOR ALL FILES
L24      21304 L12 (5A) (SYNTHES? OR PRODUC?)

=> s l24(5a) (coli or bacter? or microb? or microorganism?)
FILE 'MEDLINE'
        239516 COLI
        690022 BACTER?
        499797 MICROB?
        31537 MICROORGANISM?
L25      46 L13 (5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'SCISEARCH'
        214862 COLI
        345800 BACTER?
        126320 MICROB?
        41208 MICROORGANISM?
L26      82 L14 (5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'LIFESCI'
        93860 COLI
        182840 BACTER?
        50291 MICROB?
        37824 MICROORGANISM?
L27      33 L15 (5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'BIOTECHDS'
        43223 COLI
        115608 BACTER?
        19400 MICROB?
        25392 MICROORGANISM?
L28      66 L16 (5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'BIOSIS'
        264082 COLI
        1288092 BACTER?
        451443 MICROB?
        2600038 MICROORGANISM?
L29      70 L17 (5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'EMBASE'
        169768 COLI
        454034 BACTER?
        80206 MICROB?
        125178 MICROORGANISM?
L30      44 L18 (5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

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FILE 'HCAPLUS'
    254762 COLI
    556360 BACTER?
    389563 MICROB?
    146426 MICROORGANISM?
L31      186 L19(5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'NTIS'
    2770 COLI
    18462 BACTER?
    12601 MICROB?
    8963 MICROORGANISM?
L32      1 L20(5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'ESBIOBASE'
    62857 COLI
    175566 BACTER?
    225402 MICROB?
    14400 MICROORGANISM?
L33      40 L21(5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'BIOTECHNO'
    94549 COLI
    191870 BACTER?
    38419 MICROB?
    18193 MICROORGANISM?
L34      36 L22(5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

FILE 'WPIDS'
    17766 COLI
    101990 BACTER?
    45093 MICROB?
    46814 MICROORGANISM?
L35      48 L23(5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

TOTAL FOR ALL FILES
L36      652 L24(5A) (COLI OR BACTER? OR MICROB? OR MICROORGANISM?)

=> s l36 not 2001-2005/py
FILE 'MEDLINE'
    2351352 2001-2005/PY
L37      35 L25 NOT 2001-2005/PY

FILE 'SCISEARCH'
    4365164 2001-2005/PY
L38      53 L26 NOT 2001-2005/PY

FILE 'LIFESCI'
    413541 2001-2005/PY
L39      25 L27 NOT 2001-2005/PY

FILE 'BIOTECHDS'
    96059 2001-2005/PY
L40      46 L28 NOT 2001-2005/PY

FILE 'BIOSIS'
    2125673 2001-2005/PY
L41      47 L29 NOT 2001-2005/PY

FILE 'EMBASE'
    2010599 2001-2005/PY
L42      35 L30 NOT 2001-2005/PY

```

FILE 'HCAPLUS'
4430834 2001-2005/PY
L43 118 L31 NOT 2001-2005/PY

FILE 'NTIS'
62316 2001-2005/PY
L44 1 L32 NOT 2001-2005/PY

FILE 'ESBIOBASE'
1234639 2001-2005/PY
L45 25 L33 NOT 2001-2005/PY

FILE 'BIOTECHNO'
368875 2001-2005/PY
L46 28 L34 NOT 2001-2005/PY

FILE 'WPIDS'
4003466 2001-2005/PY
L47 31 L35 NOT 2001-2005/PY

TOTAL FOR ALL FILES
L48 444 L36 NOT 2001-2005/PY

=> dup rem l48
PROCESSING COMPLETED FOR L48
L49 207 DUP REM L48 (237 DUPLICATES REMOVED)

=> d tot

L49 ANSWER 1 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI A new chitosanase producing microbe, Burkholderia gladioli for
manufacturing chitosan oligosaccharide;
Production of chitosan oligosaccharide by Burkholderia gladioli sp.
CHB101
AN 2000-06955 BIOTECHDS
PI JP 2000041664 15 Feb 2000

L49 ANSWER 2 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on
STN
TI Fermentation of plant cell wall derived polysaccharides and their
corresponding oligosaccharides by intestinal bacteria
SO JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, (MAY 2000) Vol. 48, No. 5, pp.
1644-1652.
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
ISSN: 0021-8561.
AU VanLaere K M J; Hartemink R; Bosveld M; Schols H A; Voragen A G J
(Reprint)
AN 2000:395182 SCISEARCH

L49 ANSWER 3 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Role of oligosaccharides in microbial glycoproteins and synthetic methods
of neoglycoproteins
SO Nippon Nogei Kagaku Kaishi (2000), 74(11), 1237-1246
CODEN: NNKKAA; ISSN: 0002-1407
AU Takegawa, Kaoru
AN 2000:810811 HCAPLUS
DN 133:331223

L49 ANSWER 4 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI **Production** of heterologous **oligosaccharides** by
recombinant **bacteria** (recombinant oligosaccharides)
SO Carbohydrates in Chemistry and Biology (2000), Volume 2, 845-860.
Editor(s): Ernst, Beat; Hart, Gerald W.; Sinay, Pierre. Publisher:
Wiley-VCH Verlag GmbH, Weinheim, Germany.

CODEN: 69AMJE

AU Geremia, Roberto A.; Samain, Eric
AN 2000:717510 HCAPLUS
DN 134:85146

L49 ANSWER 5 OF 207 MEDLINE on STN DUPLICATE 2
TI Large-scale **production** of **oligosaccharides** using
engineered **bacteria**.
SO Current opinion in structural biology, (2000 Oct) 10 (5) 536-41. Ref: 50
Journal code: 9107784. ISSN: 0959-440X.
AU Endo T; Koizumi S
AN 2000502273 MEDLINE

L49 ANSWER 6 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI A novel approach to the recovery of biologically active oligosaccharides
from milk using a combination of enzymatic treatment and nanofiltration;
combined lipase and nanofiltration of human defatted milk for
production of oligosaccharide with anti-Escherichia
coli activity
SO Biotechnol.Bioeng.; (2000) 69, 4, 461-67
CODEN: BIBIAU ISSN: 0006-3592
AU Sarney D B; Hale C; Frankel G; *Vulfson E N
AN 2000-10620 BIOTECHDS

L49 ANSWER 7 OF 207 MEDLINE on STN DUPLICATE 3
TI **Microbial production of oligosaccharides**: a
review.
SO Advances in applied microbiology, (2000) 47 299-343. Ref: 115
Journal code: 0370413. ISSN: 0065-2164.
AU Prapulla S G; Subhaprada V; Karanth N G
AN 2003345491 MEDLINE

L49 ANSWER 8 OF 207 MEDLINE on STN DUPLICATE 4
TI Large-scale **production** of CMP-NeuAc and sialylated
oligosaccharides through **bacterial** coupling.
SO Applied microbiology and biotechnology, (2000 Mar) 53 (3) 257-61.
Journal code: 8406612. ISSN: 0175-7598.
AU Endo T; Koizumi S; Tabata K; Ozaki A
AN 2000233416 MEDLINE

L49 ANSWER 9 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of a di- and trisaccharide related to the repeating unit of E.
coli O128 lipopolysaccharide
SO Journal of Carbohydrate Chemistry (2000), 19(2), 243-251
CODEN: JCACDM; ISSN: 0732-8303
AU Sengupta, Prabal; Basu, Sumanta; Chatterjee, Bishnu P.
AN 2000:228023 HCAPLUS
DN 133:30898

L49 ANSWER 10 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Solid-phase **synthesis** of a **bacterial**
oligosaccharide antigen.
SO Abstracts of Papers, 220th ACS National Meeting, Washington, DC, United
States, August 20-24, 2000 (2000) ORGN-216
CODEN: 69FZC3
AU Seeberger, Peter H.; Melean, Luis G.; Haase, Wilm C.
AN 2000:796718 HCAPLUS

L49 ANSWER 11 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Large-scale production of GDP-fucose and Lewis X by bacterial coupling
SO Journal of Industrial Microbiology & Biotechnology (2000), 25(4), 213-217
CODEN: JIMBFL; ISSN: 1367-5435
AU Koizumi, S.; Endo, T.; Tabata, K.; Nagano, H.; Ohnishi, J.; Ozaki, A.
AN 2001:59943 HCAPLUS

DN 134:236268

L49 ANSWER 12 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 5

TI Uronic acid-containing oligosaccharins: Their biosynthesis, degradation
and signalling roles in non-diseased plant tissues

SO PLANT PHYSIOLOGY AND BIOCHEMISTRY, (JAN-FEB 2000) Vol. 38, No. 1-2, pp.
125-140.

Publisher: GAUTHIER-VILLARS/EDITIONS ELSEVIER, 23 RUE LINOIS, 75015 PARIS,
FRANCE.

ISSN: 0981-9428.

AU Dumville J C; Fry S C (Reprint)

AN 2000:280993 SCISEARCH

L49 ANSWER 13 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Effect on gout flora of oligosaccharide synthesizing enzymes

SO Shoka to Kyushu (2000), 23(2), 107-109

CODEN: SHKYEZ; ISSN: 0389-3626

AU Kariya, Kinya; Ogawa, Tomonari; Jo, Takashi

AN 2001:384881 HCAPLUS

DN 135:150320

L49 ANSWER 14 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 6

TI Effect of oligosaccharides and fibre substitutes on short-chain fatty acid
production by human faecal microflora

SO ANAEROBE, (APR 2000) Vol. 6, No. 2, pp. 87-92.

Publisher: ACADEMIC PRESS LTD, 24-28 OVAL RD, LONDON NW1 7DX, ENGLAND.

ISSN: 1075-9964.

AU Velazquez M; Davies C; Marett R; Slavin J L; Feirtag J M (Reprint)

AN 2000:343219 SCISEARCH

L49 ANSWER 15 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 7

TI Functional analysis of chimeras derived from the Sinorhizobium meliloti
and Mesorhizobium loti nodC genes identifies regions controlling chitin
oligosaccharide chain length

SO MOLECULAR AND GENERAL GENETICS, (SEP 2000) Vol. 264, No. 1-2, pp. 75-81.

Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.

ISSN: 0026-8925.

AU Kamst E; Breek C K D; Spaik H P (Reprint)

AN 2000:713832 SCISEARCH

L49 ANSWER 16 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN

TI Solid-phase **synthesis** of a **bacterial**
oligosaccharide antigen.

SO ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (20 AUG 2000) Vol.
220, Part 2, pp. U66-U66. MA 216-ORGN.

Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.

ISSN: 0065-7727.

AU Seeberger P H (Reprint); Melean L G; Haase W C

AN 2001:131060 SCISEARCH

L49 ANSWER 17 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Study on fructo-**oligosaccharide** **production** by
microbial enzymatic reaction

SO Shipin Kexue (Beijing) (2000), 21(6), 31-35

CODEN: SPKHD5; ISSN: 1002-6630

AU Cao, Xia; Zhang, Wei; Wang, Yingfeng; Yang, Xiushan

AN 2000:467331 HCAPLUS

DN 133:149512

L49 ANSWER 18 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

STN

TI Solid-phase **synthesis** of a **bacterial oligosaccharide** antigen.

SO Abstracts of Papers American Chemical Society, (2000) Vol. 220, No. Part 2, pp. ORGN 216. print.
Meeting Info.: 220th National Meeting of the American Chemical Society. Washington, DC, Washington DC, USA. August 20-24, 2000. American Chemical Society.
CODEN: ACSRAL. ISSN: 0065-7727.

AU Seeberger, Peter H. [Reprint author]; Melean, Luis G. [Reprint author]; Haase, Wilm C. [Reprint author]

AN 2000:440809 BIOSIS

L49 ANSWER 19 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI A process for preparation of 6-kestose oligosaccharides;
by Acetobacter polysaccharogenes or Gluconobacter albidus activity on sucrose

AN 1999-06786 BIOTECHDS

PI JP 11046785 23 Feb 1999

L49 ANSWER 20 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Cloning, expression and characterization of a UDP-galactose 4-epimerase from Escherichia coli;
plasmid pET15b-galE expression in **bacterium** for enzyme **production** and application in alpha-Gal **oligosaccharide** production for xenotransplantation support

SO Biotechnol.Lett.; (1999) 21, 12, 1131-35
CODEN: BILED3 ISSN: 0141-5492

AU Chen X; Kowal P; Hamad S; Fan H; *Wang P G

AN 2000-02215 BIOTECHDS

L49 ANSWER 21 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Beta-galactooligosaccharide synthesis with beta-galactosidase from Sulfolobus solfataricus, Aspergillus oryzae, and Escherichia coli;
oligosaccharide production using thermostable and non-thermostable enzyme

SO Enzyme Microb.Technol.; (1999) 25, 6, 509-16
CODEN: EMTED2 ISSN: 0141-0229

AU Reuter S; Nygaard A R; *Zimmermann W

AN 1999-12884 BIOTECHDS

L49 ANSWER 22 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Synthesis of alpha-galacto-oligosaccharides by a cloned alpha-galactosidase from Bifidobacterium adolescentis;
galacto-**oligosaccharide** probiotic **production** using transformed Escherichia coli

SO Biotechnol.Lett.; (1999) 21, 5, 441-45
CODEN: BILED3 ISSN: 0141-5492

AU van den Broek L A M; Ton J; Verdoes J C; van Laere K M J; *Voragen A G J; Beldman G

AN 1999-10111 BIOTECHDS

L49 ANSWER 23 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 8

TI **Microbial production** of inulo-**oligosaccharides** by an endoinulinase from Pseudomonas sp expressed in Escherichia coli

SO JOURNAL OF BIOSCIENCE AND BIOENGINEERING, (MAR 1999) Vol. 87, No. 3, pp. 291-295.
Publisher: SOC BIOSCIENCE BIOENGINEERING JAPAN, OSAKA UNIV, FACULTY ENGINEERING, 2-1 YAMADAOKA, SUITA, OSAKA 565-0871, JAPAN.
ISSN: 1389-1723.

AU Yun J W (Reprint); Choi Y J; Song C H; Song S K

AN 1999:502481 SCISEARCH

L49 ANSWER 24 OF 207 MEDLINE on STN DUPLICATE 9
 TI Oligosaccharide recognition signals and defence reactions in marine plant-microbe interactions.
 SO Current opinion in microbiology, (1999 Jun) 2 (3) 276-83. Ref: 64
 Journal code: 9815056. ISSN: 1369-5274.
 AU Potin P; Bouarab K; Kupper F; Kloareg B
 AN 1999316463 MEDLINE

L49 ANSWER 25 OF 207 MEDLINE on STN DUPLICATE 10
 TI Electron beam fragmentation of **bacterial** polysaccharides as a method of **producing oligosaccharides** for the preparation of conjugate vaccines.
 SO FEMS microbiology letters, (1999 May 15) 174 (2) 255-63.
 Journal code: 7705721. ISSN: 0378-1097.
 AU Pawlowski A; Svenson S B
 AN 1999271175 MEDLINE

L49 ANSWER 26 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Isolation of endophytes from plants in Southeast Asia and Japan, and their identification by 18S rRNA gene
 SO Biotechnology for Sustainable Utilization of Biological Resources in the Tropics (1999), 13, 227-232
 CODEN: BSUTFT
 AU Tanaka, Michiko; Sukiman, Harmastini; Takebayashi, Miho; Saito, Katsuichi; Suto, Manabu; Prana, Titik K.; Prana, Made Sri; Tomita, Fusao
 AN 2000:309091 HCAPLUS
 DN 133:234880

L49 ANSWER 27 OF 207 MEDLINE on STN DUPLICATE 11
 TI The living factory: in vivo production of N-acetyllactosamine containing carbohydrates in E. coli.
 SO Glycoconjugate journal, (1999 Mar) 16 (3) 205-12.
 Journal code: 8603310. ISSN: 0282-0080.
 AU Bettler E; Samain E; Chazalet V; Bosso C; Heyraud A; Joziassse D H;
 Wakarchuk W W; Imberty A; Geremia A R
 AN 2000062031 MEDLINE

L49 ANSWER 28 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 12
 TI Functional domains in the chitin oligosaccharide synthase NodC and related beta-polysaccharide synthases
 SO TRENDS IN GLYCOSCIENCE AND GLYCOTECHNOLOGY, (JUL 1999) Vol. 11, No. 60, pp. 187-199.
 Publisher: FCCA-FORUM CARBOHYDRATES COMING AGE, C/O GAKUSHIN CO LTD, DEPT PUBL 2-1-21 TARUMI-CHO, SUITA 564, OSAKA JAPAN.
 ISSN: 0915-7352.
 AU Kamst E (Reprint); Spaink P H
 AN 1999:800647 SCISEARCH

L49 ANSWER 29 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 13
 TI Chemical synthesis of N-acetylglucosamine derivatives and their use as glycosyl accepters by the Mesorhizobium loti chitin oligosaccharide synthase NodC
 SO CARBOHYDRATE RESEARCH, (15 OCT 1999) Vol. 321, No. 3-4, pp. 176-189.
 Publisher: ELSEVIER SCI LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND.
 ISSN: 0008-6215.
 AU Kamst E; ZegelaarJaarsveld K; vanderMarel G A; vanBoom J H; Lugtenberg B J J; Spaink H P (Reprint)
 AN 1999:960921 SCISEARCH

L49 ANSWER 30 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 14

TI Synthesis of inner core antigens related to Chlamydia, Pseudomonas and Acinetobacter LPS
 SO JOURNAL OF ENDOTOXIN RESEARCH, (FEB 1999) Vol. 5, No. 3, pp. 157-163. Publisher: MANEY PUBLISHING LTD, HUNDSON RD, LEEDS LS9 7DL, ENGLAND. ISSN: 0968-0519.
 AU Kosma P (Reprint); Reiter A; Zamyatina A; Wimmer N; Gluck A; Brade H
 AN 1999:745974 SCISEARCH

L49 ANSWER 31 OF 207 MEDLINE on STN DUPLICATE 15
 TI **Synthesis of oligosaccharides by bacterial enzymes.**
 SO Glycoconjugate journal, (1999 Feb) 16 (2) 141-6. Ref: 54
 Journal code: 8603310. ISSN: 0282-0080.
 AU Johnson K F
 AN 2000077660 MEDLINE

L49 ANSWER 32 OF 207 MEDLINE on STN DUPLICATE 16
 TI Enzymatic **synthesis** of Kdn **oligosaccharides** by a **bacterial** alpha-(2-->6)-sialyltransferase.
 SO Carbohydrate research, (1999 Jan 31) 315 (1-2) 137-41.
 Journal code: 0043535. ISSN: 0008-6215.
 AU Kajihara Y; Akai S; Nakagawa T; Sato R; Ebata T; Kodama H; Sato K
 AN 1999313754 MEDLINE

L49 ANSWER 33 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Isolation of chitinolytic bacteria from the viscera of korean bony fishes and optimization of the enzyme production
 SO Journal of Fisheries Science and Technology (1999), 2(1), 105-111
 CODEN: JFITFY; ISSN: 1226-9204
 AU Lee, Jung-Suck; Joo, Dong-Sik; Cho, Soon-Yeong; Cho, Man-Gi; Lee, Eung-Ho
 AN 1999:731614 HCAPLUS
 DN 132:90444

L49 ANSWER 34 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 17
 TI **Production of inulo-oligosaccharides from inulin by recombinant E-coli containing endoinulinase activity**
 SO BIOPROCESS ENGINEERING, (AUG 1999) Vol. 21, No. 2, pp. 101-106. Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010. ISSN: 0178-515X.
 AU Yun J W (Reprint); Song C H; Choi J W; Choi Y J; Song S K
 AN 1999:657521 SCISEARCH

L49 ANSWER 35 OF 207 MEDLINE on STN DUPLICATE 18
 TI Function of chitin oligosaccharides in plant and animal development.
 SO EXS, (1999) 87 71-83. Ref: 59
 Journal code: 9204529. ISSN: 1023-294X.
 AU Bakkers J; Kijne J W; Spaink H P
 AN 2000391648 MEDLINE

L49 ANSWER 36 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Problems and strategies of **oligosaccharide synthesis** using **microbial** enzymes
 SO Shipin Yu Fajiao Gongye (1999), 25(4), 41-47
 CODEN: SPYYDO; ISSN: 0253-990X
 AU Cao, Jinsong; Wang, Xiaoqin; Peng, Zhiying
 AN 1999:715896 HCAPLUS
 DN 132:264230

L49 ANSWER 37 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
 TI Production of O-acetylated and sulfated chitooligosaccharides by recombinant Escherichia coli strains harboring different combinations of nod genes.

SO Journal of Biotechnology, (June 11, 1999) Vol. 72, No. 1-2, pp. 33-47.
print.
CODEN: JBITD4. ISSN: 0168-1656.
AU Samain, Eric [Reprint author]; Chazalet, Valerie; Geremia, Roberto A.
AN 1999:349692 BIOSIS

L49 ANSWER 38 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 19

TI Analysis and characterisation of cyclodextrins and their inclusion
complexes by affinity capillary electrophoresis

SO JOURNAL OF CHROMATOGRAPHY A, (19 MAR 1999) Vol. 836, No. 1, pp. 3-14.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM,
NETHERLANDS.
ISSN: 0021-9673.

AU Larsen K L; Zimmermann W (Reprint)
AN 1999:259017 SCISEARCH

L49 ANSWER 39 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Expressing high levels of glycosyltransferases;
recombinant enzyme production via vector-mediated glycosyltransferase
gene transfer and expression in Escherichia coli for
therapeutic **oligosaccharide production**

AU Wakarchuk W W; Young N M
AN 1999-02440 BIOTECHDS
PI WO 9854331 3 Dec 1998

L49 ANSWER 40 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Gene encoding a beta-galactoside-alpha-2,6-sialyltransferase of bacterial
origin;

Photobacterium damsela recombinant enzyme production by vector
expression in Escherichia coli for use in sialylated
oligosaccharide production

AU Yamamoto T; Nakashizuka M; Terada I
AN 1998-10644 BIOTECHDS
PI WO 9838315 3 Sep 1998

L49 ANSWER 41 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of fructosyl-containing oligosaccharides and products
therefrom for bifidobacterium-nourishing medium

SO U.S., 7 pp., Cont. of U.S. Ser. No. 282,807, abandoned.
CODEN: USXXAM

IN Whistler, Roy L.; Bemiller, James N.

AN 1998:799690 HCAPLUS

DN 130:35374

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 5843922	A	19981201	US 1996-662201	19960611

L49 ANSWER 42 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of **microbial** galactosidase for the
production of galacto-oligosaccharides

SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

IN Fujimoto, Hiroshi; Ajisaka, Katsumi

AN 1998:497937 HCAPLUS

DN 129:119599

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 10201472	A2	19980804	JP 1997-25774	19970127

L49 ANSWER 43 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI Use of anti-endotoxin synthetic peptides and anti-endotoxin antibodies -
for the prophylaxis and treatment of endotoxemia and septic shock and
other conditions associated with lipopolysaccharide..

PI EP 842666 A2 19980520 (199824)* EN 5 A61K039-40
 R: AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO
 SE SI
 IT 1287158 B 19980804 (200055) A01K000-00
 IN PORRO, M

L49 ANSWER 44 OF 207 MEDLINE on STN DUPLICATE 20
 TI Use of Escherichia coli polyphosphate kinase for
oligosaccharide synthesis.
 SO Bioscience, biotechnology, and biochemistry, (1998 Aug) 62 (8) 1594-6.
 Journal code: 9205717. ISSN: 0916-8451.
 AU Noguchi T; Shiba T
 AN 1998430132 MEDLINE

L49 ANSWER 45 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Use of Escherichia coli polyphosphate-kinase for
oligosaccharide synthesis;
 recombinant enzyme production and purification via vector plasmid
 pTrc-PPK-mediated ppk gene transfer and expression in bacterium
 SO Biosci.Biotechnol.Biochem.; (1998) 62, 8, 1594-96
 CODEN: BBBIEJ ISSN: 0916-8451
 AU Hoguchi T; Shiba T
 AN 1999-12277 BIOTECHDS

L49 ANSWER 46 OF 207 MEDLINE on STN DUPLICATE 21
 TI Large-scale production of UDP-galactose and globotriose by coupling
 metabolically engineered bacteria.
 SO Nature biotechnology, (1998 Sep) 16 (9) 847-50.
 Journal code: 9604648. ISSN: 1087-0156.
 AU Koizumi S; Endo T; Tabata K; Ozaki A
 AN 1998414050 MEDLINE

L49 ANSWER 47 OF 207 MEDLINE on STN DUPLICATE 22
 TI Isolation and structural analyses of positional isomers of
 6(1),6m-di-O-alpha-D-mannopyranosyl-cyclomaltooctaose (m = 2-5) and
 6-O-alpha-(n-O-alpha-D-mannopyranosyl)-alpha-D-mannopyranosyl-
 cyclomaltooctaose (n = 2, 3, 4, and 6).
 SO Carbohydrate research, (1998 Aug) 310 (4) 229-38.
 Journal code: 0043535. ISSN: 0008-6215.
 AU Okada Y; Matsuda K; Koizumi K; Hamayasu K; Hashimoto H; Kitahata S
 AN 1999038702 MEDLINE

L49 ANSWER 48 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI New heat stable xylanase and related nucleic acid and vectors;
 thermostable endo-1,4-beta-D-xylanase expression from new vector in
microorganism for use in xylose, xylo-oligosaccharide
production, pulp bleaching, feedstuff treatment, etc.
 AU Perez S; Breton C; Debeire P
 AN 1997-07295 BIOTECHDS
 PI WO 9714803 24 Apr 1997

L49 ANSWER 49 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI New beta-galactosidase - is originated from Bacillus microbe and
 hydrolyses beta 1-3 galactoside bond produces key oligosaccharide at low
 cost.
 PI JP 09313177 A 19971209 (199808)* 12 C12N009-38

L49 ANSWER 50 OF 207 MEDLINE on STN DUPLICATE 23
 TI Chitin oligosaccharides can induce cortical cell division in roots of
 Vicia sativa when delivered by ballistic microtargeting.
 SO Development (Cambridge, England), (1997 Dec) 124 (23) 4887-95.
 Journal code: 8701744. ISSN: 0950-1991.
 AU Schlaman H R; Gisel A A; Quaedvlieg N E; Bloemberg G V; Lugtenberg B J;
 Kijne J W; Potrykus I; Spaink H P; Sautter C

AN 1998088701 MEDLINE

L49 ANSWER 51 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 24

TI Honeydew sugars and osmoregulation in the pea aphid *Acyrtosiphon pisum*

SO JOURNAL OF EXPERIMENTAL BIOLOGY, (AUG 1997) Vol. 200, No. 15, pp.
2137-2143.
Publisher: COMPANY OF BIOLOGISTS LTD, BIDDER BUILDING CAMBRIDGE COMMERCIAL
PARK COWLEY RD, CAMBRIDGE, CAMBS, ENGLAND CB4 4DL.
ISSN: 0022-0949.

AU Wilkinson T L; Ashford D A; Pritchard J; Douglas A E (Reprint)

AN 97:595141 SCISEARCH

L49 ANSWER 52 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Comparison of two levanases producing specific lengths of
levan-oligosaccharides

SO Kagaku to Kogyo (Osaka) (1997), 71(9), 386-391
CODEN: KKGOAG; ISSN: 0368-5918

AU Murakami, Hiromi; Kitahata, Sumio

AN 1997:611452 HCAPLUS

DN 127:259432

L49 ANSWER 53 OF 207 MEDLINE on STN DUPLICATE 25

TI Role of intestinal bacteria in nutrient metabolism.

SO JPEN. Journal of parenteral and enteral nutrition, (1997 Nov-Dec) 21 (6)
357-65. Ref: 104
Journal code: 7804134. ISSN: 0148-6071.

AU Cummings J H; Macfarlane G T

AN 1998069210 MEDLINE

L49 ANSWER 54 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI An endo-chitosanase from *Bacillus* sp. GM44 that produces chitosan
oligosaccharides with high degree of polymerization

SO Advances in Chitin Science (1997), 2, 296-301
CODEN: ACSCFF

AU Choi, Yeun Jin; Kim, Eun Jung; Kim, Tae Un; Shin, Yong Chul

AN 1998:181377 HCAPLUS

DN 128:291908

L49 ANSWER 55 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 26

TI **Synthesis of oligosaccharides of bacterial**
origin containing heptoses, uronic acids and fructofuranoses as synthetic
challenges

SO TOPICS IN CURRENT CHEMISTRY, (MAR 1997) Vol. 186, pp. 171-202.
Publisher: SPRINGER-VERLAG BERLIN, HEIDELBERGER PLATZ 3, W-1000 BERLIN 33,
GERMANY.
ISSN: 0342-6793.

AU Oscarson S (Reprint)

AN 97:248426 SCISEARCH

L49 ANSWER 56 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN

TI Characterization of an endoxylanase produced by an isolated strain of
Bacillus sp

SO JOURNAL OF MICROBIOLOGY AND BIOTECHNOLOGY, (APR 1997) Vol. 7, No. 2, pp.
114-120.
Publisher: KOREAN SOC APPLIED MICROBIOLOGY, 635-4 YEOGSAM-DONG,
KANGNAM-KU, SEOUL, 135-703, KOREA.
ISSN: 1017-7825.

AU Lee J J (Reprint); Hahm K S; Lee K Y; Lee S T

AN 97:354624 SCISEARCH

L49 ANSWER 57 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Study on the production of oligosaccharides by using enzymes from *Bacillus* genus
 SO Oyo Toshitsu Kagaku (1997), 44(1), 61-67
 CODEN: OTKAE3; ISSN: 1340-3494
 AU Oguma, Tetsuya
 AN 1997:369287 HCAPLUS
 DN 127:49228

L49 ANSWER 58 OF 207 MEDLINE on STN DUPLICATE 27
 TI Gram-scale synthesis of recombinant chitooligosaccharides in *Escherichia coli*.
 SO Carbohydrate research, (1997 Jul 11) 302 (1-2) 35-42.
 Journal code: 0043535. ISSN: 0008-6215.
 AU Samain E; Drouillard S; Heyraud A; Driguez H; Geremia R A
 AN 97393445 MEDLINE

L49 ANSWER 59 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 28
 TI Role of intestinal bacteria in nutrient metabolism
 SO CLINICAL NUTRITION, (FEB 1997) Vol. 16, No. 1, pp. 3-11.
 Publisher: CHURCHILL LIVINGSTONE, JOURNAL PRODUCTION DEPT, ROBERT STEVENSON HOUSE, 1-3 BAXTERS PLACE, LEITH WALK, EDINBURGH EH1 3AF, MIDLOTHIAN, SCOTLAND.
 ISSN: 0261-5614.
 AU Cummings J H (Reprint); Macfarlane G T
 AN 97:323068 SCISEARCH

L49 ANSWER 60 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI New *Aspergillus fumigatus* mutant capable of decomposing chitosan - is used to **produce** chitosan-**oligosaccharide** by culturing the **microbe**.
 PI JP 08322554 A 19961210 (199718)* 7 C12N001-14
 JP 2797081 B2 19980917 (199842) 7 C12N001-14
 KR 140430 B1 19980701 (200017) C12N001-14
 IN JUNG, B; LEE, S

L49 ANSWER 61 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI *Rhizobium leguminosarum* bv. *trifolii* produces lipo-chitin oligosaccharides with node-dependent highly unsaturated fatty acyl moieties. An electrospray ionization and collision-induced dissociation tandem mass spectrometric study
 SO Journal of Biological Chemistry (1996), 271(37), 22563-22569
 CODEN: JBCHA3; ISSN: 0021-9258
 AU van der Drift, Koen M. G. M.; Spaink, Herman P.; Bloemberg, Guido V.; van Brussel, Anton A. N.; Lugtenberg, Ben J. J.; Haverkamp, Johan; Thomas-Oates, Jane E.
 AN 1996:572214 HCAPLUS
 DN 125:269553

L49 ANSWER 62 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Production of galacto-oligosaccharide from lactose by *Sterigmatomyces elviae* CBS8119. [Erratum to document cited in CA123:312277]
 SO Applied and Environmental Microbiology (1996), 62(4), 1491
 CODEN: AEMIDF; ISSN: 0099-2240
 AU Onishi, Norimasa; Yamashiro, Akihiro; Yokozeki, Kenzo
 AN 1996:213785 HCAPLUS
 DN 125:56295

L49 ANSWER 63 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Controlled bioconversion of the extracellular polysaccharide of *Klebsiella pneumoniae* LMG 3136;
 L-fucose-containing polysaccharide production and degradation by soil-derived **microorganism** for **oligosaccharide** **production** (conference paper)

SO Meded.Fac.Landbouwwet.Rijksuniv.Gent; (1996) 61, 4A, 1445-48
 CODEN: MFLRA3 ISSN: 0368-9697
 Applied Biotechnology, 10th Forum, Ghent, Belgium, 26-27 September, 1996.
 AU Vanhooren P T; Mornie C J C; Vandamme E J
 AN 1996-15510 BIOTECHDS

L49 ANSWER 64 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
 on STN DUPLICATE 29
 TI CHEMICAL APPROACHES TO **BACTERIAL** VACCINES - **SYNTHESIS**
 OF MYCOBACTERIAL **OLIGOSACCHARIDE**-PROTEIN CONJUGATES FOR USE AS
 SERODIAGNOSTICS AND IMMUNOGENS
 SO BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, (18 JUN 1996) Vol. 6, No. 12,
 pp. 1387-1392.
 ISSN: 0960-894X.
 AU DUBOIS E P; ROBBINS J B; POZSGAY V (Reprint)
 AN 96:500500 SCISEARCH

L49 ANSWER 65 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Cladinose analogs of sixteen-membered macrolide antibiotics. I. Synthesis
 of 4-O-alkyl-L-cladinose analogs via glycosidation
 SO Journal of Antibiotics (1996), 49(6), 582-592
 CODEN: JANTAJ; ISSN: 0021-8820
 AU Kurihara, Ken-ichi; Ajito, Keichi; Shibahara, Seiji; Ishizuka, Tsuneo;
 Hara, Osamu; Araake, Minako; Omoto, Shioji
 AN 1996:390305 HCAPLUS
 DN 125:168505

L49 ANSWER 66 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Production and application of microbial endoglycosidases acting on
 oligosaccharides of glycoconjugates
 SO Microbial Utilization of Renewable Resources (1996), Volume Date 1995, 9,
 420-429
 CODEN: MURRE6
 AU Yamamoto, Kenji; Kadowaki, Setsu; Takegawa, Kaoru; Fan, Jian-Qiang;
 Ashida, Hisashi; Kumagai, Hidehiko; Tochikura, Tatsurokuro
 AN 1996:510616 HCAPLUS
 DN 125:161907

L49 ANSWER 67 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Sugar signals and legume lectins
 SO Biology of Plant-Microbe Interactions (1996), Volume 1, 399-402 Publisher:
 International Society for Molecular Plant-Microbe Interactions, St. Paul,
 Minn.
 CODEN: BPPIAC
 AU Diaz, Clara L.; Spaink, Herman P.; Kijne, Jan W.
 AN 1997:239949 HCAPLUS
 DN 126:235885

L49 ANSWER 68 OF 207 MEDLINE on STN DUPLICATE 30
 TI Structural determination of symbiotic nodulation factors from the broad
 host-range Rhizobium species NGR234.
 SO Carbohydrate research, (1996 Aug 19) 289 115-36.
 Journal code: 0043535. ISSN: 0008-6215.
 AU Price N P; Talmont F; Wieruszeski J M; Prome D; Prome J C
 AN 96399206 MEDLINE

L49 ANSWER 69 OF 207 NTIS COPYRIGHT 2005 NTIS on STN
 TI Seibutsu kino wo riyoshita chikyu kankyo kaizen gijutsu ni kansuru
 chosa. Lignobio process no kochiku. (Investigation into technology for
 improving the global environment using biological functions.
 Construction of the lignobiological process).
 NR DE96739631/XAB; NEDO-GET-9402
 252p; Mar 1995
 PD Mar 1995

AN 1996(19):04476 NTIS

L49 ANSWER 70 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI **Production of microorganism** to yield chitosan
oligosaccharide;
purification from Absidia coerulea or Mucor tuberculisporus by cell
wall lysis using Bacillus sp. chitosanase or Trichoderma sp. cellulase
lytic enzyme

AN 1995-11530 BIOTECHDS
PI JP 07155193 20 Jun 1995

L49 ANSWER 71 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI New protein with cycloinulo-oligosaccharide-fructanotransferase activity;
recombinant enzyme production by gene expression in Bacillus circulans
AN 1995-06720 BIOTECHDS
PI JP 07041500 10 Feb 1995

L49 ANSWER 72 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Ethanol production with recombinant Gram-positive microbes expressing
exogenous pyruvate decarboxylase and alcohol dehydrogenase genes
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

IN Ingram, Lonnie O'Neal; Barbosa-Alleyne, Maria de F. S.
AN 1995:992753 HCAPLUS
DN 124:28129

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9527064	A1	19951012	WO 1995-US4012	19950330
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5482846	A	19960109	US 1994-220072	19940330
AU 9522034	A1	19951023	AU 1995-22034	19950330

L49 ANSWER 73 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI A pyrazine derivative inhibiting agglutination of erythrocytes or platelets -
is prepared from chitin or chitin oligosaccharide by reacting with an enzyme
produced by Vibrio alginolyticus.
PI JP 07118286 A 19950509 (199527)* 7 C07H015-26

L49 ANSWER 74 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Bacterial toxin neutraliser - comprises the aminocarbonyl prod. obtained
from protein and oligosaccharide having galactose at non-reducing terminal
and glucose at reducing terminal of saccharide chain.
PI JP 07033679 A 19950203 (199515)* 4 A61K038-00

L49 ANSWER 75 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Producing oligosaccharide(s) containing panose - by inoculating Saccharomyces
microbes in medium containing maltose as carbon source, culturing in aerobic
conditions and separating produced panose.
PI JP 07008287 A 19950113 (199512)* 4 C12P019-00

L49 ANSWER 76 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Producing oligosaccharide(s) containing panose - by inoculating Monilella
microbes to medium containing maltose carbon source, aerobically culturing and
separating obtd. panose.
PI JP 07008286 A 19950113 (199512)* 4 C12P019-00

L49 ANSWER 77 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Panose-containing oligosaccharide production for food and drink or drugs -
comprises inoculating Debaryomyces in maltose-containing medium, and culturing

microbe in aerobic conditions.

PI JP 07008285 A 19950113 (199512)* 4 C12P019-00

L49 ANSWER 78 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI Panose containing oligosaccharide production, used for food, drink or drugs - involves culturing *Aureobasidium* microbes under aerobic conditions using maltose containing medium.

PI JP 07008283 A 19950113 (199512)* 6 C12P019-00

L49 ANSWER 79 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Mass spectrometric analysis of chitin oligosaccharides produced by *Rhizobium NodC* protein in *Escherichia coli*

SO Journal of Bacteriology (1995), 177(21), 6282-5
CODEN: JOBAAY; ISSN: 0021-9193

AU Kamst, Eric; van der Drift, Koen M. G. M.; Thomas-Oates, Jane E.; Lugtenberg, Ben J. J.; Spaink, Herman P.

AN 1995:904021 HCAPLUS

DN 123:310015

L49 ANSWER 80 OF 207 MEDLINE on STN DUPLICATE 32

TI Production of galacto-oligosaccharide from lactose by *Sterigmatomyces elviae* CBS8119.

SO Applied and environmental microbiology, (1995 Nov) 61 (11) 4022-5.
Journal code: 7605801. ISSN: 0099-2240.

AU Onishi N; Yamashiro A; Yokozeki K

AN 96064415 MEDLINE

L49 ANSWER 81 OF 207 MEDLINE on STN DUPLICATE 33

TI Synthesis of "Nod"-like chitin oligosaccharides by the *Xenopus* developmental protein DG42.

SO Proceedings of the National Academy of Sciences of the United States of America, (1995 Apr 11) 92 (8) 3498-501.
Journal code: 7505876. ISSN: 0027-8424.

AU Semino C E; Robbins P W

AN 95241529 MEDLINE

L49 ANSWER 82 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Studies on a recombinant amylosucrase;
Neisseria polysaccharea enzyme expression in *Escherichia coli*, for potential use in **oligosaccharide production**
(conference paper)

SO Prog.Biotechnol.; (1995) 10, 313-20
CODEN: PBITE3 ISSN: 0921-0423
Carbohydrate Bioengineering, International Conference, Elsinore, Denmark, 23-26 April, 1995.

AU Remaud-Simeon M; Albaret F; Canard B; Varlet I; Colonna P; Willemot R M; Monsan P

AN 1996-10216 BIOTECHDS

L49 ANSWER 83 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Sannamycin-type amino glycoside antibiotics of natural and non-natural (mirror-image) configuration - total syntheses and biological activity

SO Liebigs Annalen (1995), (2), 291-316
CODEN: LANAEM; ISSN: 0947-3440

AU Ludin, Christian; Weller, Thomas; Seitz, Bernhard; Meier, Walter; Erbeck, Silke; Hoenke, Christoph; Krieger, Richard; Keller, Manfred; Knothe, Lothar; et al.

AN 1995:348064 HCAPLUS

DN 123:257178

L49 ANSWER 84 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 34

TI BIOTECHNICAL MODIFICATION OF CARBOHYDRATES

SO FEMS MICROBIOLOGY REVIEWS, (FEB 1995) Vol. 16, No. 2-3, pp. 163-186.

ISSN: 0168-6445.

AU VANDAMME E J (Reprint); SOETAERT W
AN 95:184299 SCISEARCH

L49 ANSWER 85 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Oligosaccharide pharmaceuticals
SO Biol. Approaches Ration. Drug Des. (1995), 131-47. Editor(s): Weiner,
David B.; Williams, William V. Publisher: CRC, Boca Raton, Fla.
CODEN: 61EZA8

AU Roth, Stephen; Zopf, David
AN 1995:546987 HCAPLUS
DN 123:112522

L49 ANSWER 86 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of 5-deoxy-5-epifluoro derivatives of arbekacin, amikacin, and
1-N-[(S)-4-amino-2-hydroxybutanoyl]tobramycin (study on structure-toxicity
relationships)

SO Carbohydrate Research (1995), 276(1), 75-89
CODEN: CRBRAT; ISSN: 0008-6215

AU Shitara, Tetsuo; Umemura, Eijiro; Tsuchiya, Tsutomu; Matsuno, Tomio
AN 1995:902492 HCAPLUS
DN 124:176722

L49 ANSWER 87 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Production of fructosylxyloside from Scopulaliopsis brevicaulis. II.
Method for crystallizing fructosylxyloside in water and the
characteristics of crystals

SO Seito Gijutsu Kenkyu Kaishi (1995), 43, 43-9
CODEN: SGIKA6; ISSN: 0370-9841

AU Takeda, Hiroyuki; Sato, Yuzi; Tukada, Masayuki; Hidano, Tetuhiro
AN 1996:261077 HCAPLUS
DN 124:287170

L49 ANSWER 88 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Studies on oligosaccharides related to gram-negative bacterial O-antigen
SO Huaxue Tongbao (1995), (3), 25-30
CODEN: HHTPAU; ISSN: 0441-3776

AU Zhang, Jian; Mao, Jianmin; Cai, Mengshen
AN 1995:886680 HCAPLUS
DN 123:282954

L49 ANSWER 89 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Production of Bacillus licheniformis maltogenic amylase (BLMA) in
recombinant E. coli;
over-production in Escherichia coli high cell density fed-batch
culture by suppression of citric acid formation (conference abstract)

SO Abstr.Pap.Am.Chem.Soc.; (1995) 209 Meet., Pt.1, BIOT119
CODEN: ACSRAL ISSN: 0065-7727
209th ACS National Meeting, Anaheim, CA, 2-6 April, 1995.

AU Lee W J; Kim M D; Park K H; Seo J H
AN 1995-13425 BIOTECHDS

L49 ANSWER 90 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Glycosyltransferases in oligosaccharide synthesis: selective
beta-mannosylation of chitobiose to the N-linked core trisaccharide of
glycoproteins;

beta-mannosyltransferase over-expression in Escherichia coli
and purification and immobilization for oligosaccharide
production (conference abstract)

SO Abstr.Pap.Am.Chem.Soc.; (1995) 209 Meet., Pt.1, BIOT114
CODEN: ACSRAL ISSN: 0065-7727
209th ACS National Meeting, Anaheim, CA, 2-6 April, 1995.

AU Flitsch S L
AN 1995-13381 BIOTECHDS

L49 ANSWER 91 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI A gene encoding a protein having agarase activity;
 Vibrio sp. recombinant agarase production following gene cloning and
 expression in Escherichia coli; potential application in
 neo-agar-oligosaccharide production
 AN 1995-01816 BIOTECHDS
 PI JP 06284888 11 Oct 1994

L49 ANSWER 92 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Cyclic inulo-oligosaccharide(s) for foodstuff additives - obt'd. by
 treating inulin with the supernatant or cells from culture of a
 microorganism which produces a suitable enzyme.
 PI WO 9410295 A1 19940511 (199420)* JA 15 C12N009-10
 RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
 W: US
 JP 06141856 A 19940524 (199425) 3 C12N009-10
 JP 06141879 A 19940524 (199425) 4 C12P019-18
 IN KUSHIBE, S; MORIMOTO, Y

L49 ANSWER 93 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI New tetra glyose and its partial fatty acid ester used as surfactant -
 obt'd. by culturing microorganisms of Actinomycetes or Micropolyspora genus
 in medium.
 PI JP 06298784 A 19941025 (199502)* 5 C07H003-06
 JP 2564752 B2 19961218 (199704) 5 C07H003-06

L49 ANSWER 94 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI New cyclo-iso malto-oligosaccharide(s) - are inclusion agents which can
 solubilise and stabilise substances and for use in e.g. medicaments and
 food.
 PI EP 608636 A1 19940803 (199430)* EN 15 C08B037-02
 R: DE FR GB NL SE
 JP 06197783 A 19940719 (199433) 6 C12P019-04
 US 5364936 A 19941115 (199445) 10 C08B037-16
 JP 07008276 A 19950113 (199512) 7 C12N009-44
 US 5453369 A 19950926 (199544) 10 C12N009-10
 EP 608636 B1 19970305 (199714) EN 17 C08B037-02
 R: DE FR GB NL SE
 DE 69308531 E 19970410 (199720) C08B037-02
 JP 3075873 B2 20000814 (200043) 6 C12P019-04
 JP 3117328 B2 20001211 (200101) 9 C12N009-44
 IN HORIUCHI, T; OGUMAN, T; TOBE, K; OGUMAM, T; OGUMA, T

L49 ANSWER 95 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Recombinant whole cells as catalysts for enzymic synthesis of
 oligosaccharides and glycopeptides
 SO Angewandte Chemie (1994), 106(12), 1346-7 (See also Angew. Chem., Int. Ed.
 Engl., 1994, 33(12), 1241-2)
 CODEN: ANCEAD; ISSN: 0044-8249
 AU Herrmann, Guido F.; Wang, Peng; Shen, Gwo-Jenn; Wong, Chi-Huey
 AN 1994:555800 HCAPLUS
 DN 121:155800

L49 ANSWER 96 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI On the action mechanism of cyclomaltodextrin-glucanotransferases from
 alkalophilic, thermophilic and mesophilic microorganisms;
 cyclomaltodextrin-glucanotransferase characterization for use in
 cyclodextrin production
 SO Biokhimiya; (1994) 59, 8, 1122-29
 CODEN: BIOHAO
 AU Abelian V H; Yamamoto T; Afrikian E G
 AN 1994-14334 BIOTECHDS

L49 ANSWER 97 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI The in vitro biosynthesis of functional nodulation factors (Nod Rm) produced by *Rhizobium meliloti* 1021
 SO Cellular and Molecular Biology (Paris) (1994), 40(7), 1029-37
 CODEN: CMOBEF; ISSN: 0145-5680
 AU Semino, Carlos E.; Dankert, Marcelo A.
 AN 1995:140594 HCAPLUS
 DN 122:27438

L49 ANSWER 98 OF 207 MEDLINE on STN DUPLICATE 35
 TI Nodulation protein NodL of *Rhizobium leguminosarum* O-acetylates lipo-oligosaccharides, chitin fragments and N-acetylglucosamine in vitro.
 SO Molecular microbiology, (1994 Feb) 11 (4) 793-804.
 Journal code: 8712028. ISSN: 0950-382X.
 AU Bloemberg G V; Thomas-Oates J E; Lugtenberg B J; Spaink H P
 AN 94254735 MEDLINE

L49 ANSWER 99 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Molecular signals related to the nodulation of legumes by rhizobia
 SO Revista Brasileira de Ciencia do Solo (1994), 18(3), 339-64
 CODEN: RBCSDP; ISSN: 0100-0683
 AU Hungria, M.
 AN 1995:669935 HCAPLUS
 DN 123:193547

L49 ANSWER 100 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Batch production of high-content fructo-oligosaccharides from sucrose by the mixed-enzyme system of beta-fructofuranosidase and glucose-oxidase; application as a sweetener
 SO J.Ferment.Bioeng.; (1994) 77, 2, 159-63
 CODEN: JFBIEX
 AU Yun J W; Lee M G; *Song S.K
 AN 1994-05190 BIOTECHDS

L49 ANSWER 101 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI The molecular basis of host specificity in the *Rhizobium leguminosarum*-plant interaction
 SO Current Plant Science and Biotechnology in Agriculture (1994), 21(Advances in Molecular Genetics of Plant-Microbe Interactions, Vol. 3), 91-8
 CODEN: CPBAE2; ISSN: 0924-1949
 AU Spaink, Herman P.; Bloemberg, Guido V.; Wijfjes, Andre H. M.; Ritsema, Tita; Geiger, Otto; Lopez-Lara, Isabel M.; Harteveld, Marga; Kafetzopoulos, Dimitris; Brussel, van Anton A. N.; et al.
 AN 1995:671648 HCAPLUS
 DN 123:79085

L49 ANSWER 102 OF 207 MEDLINE on STN DUPLICATE 36
 TI The molecular basis of the host specificity of the *Rhizobium* bacteria.
 SO Antonie van Leeuwenhoek, (1994) 65 (2) 81-98. Ref: 49
 Journal code: 0372625. ISSN: 0003-6072.
 AU Spaink H P
 AN 95070066 MEDLINE

L49 ANSWER 103 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Large scale heterologous expression, purification and synthetic studies of an alpha-1,2-mannosyltransferase; gene cloning in *Escherichia coli* for use in oligosaccharide and glycopeptide production (conference abstract)
 SO Abstr.Pap.Am.Chem.Soc.; (1994) 207 Meet., Pt.1, BIOT156
 CODEN: ACSRAL
 AU Herrmann G F; Wong C H
 AN 1994-06460 BIOTECHDS

L49 ANSWER 104 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Sebum secretagogue;
 prepared from malto-oligosaccharide e.g. maltotriose, maltotetraose or
 maltopentaose, which is prepared by partial starch hydrolysis using
 acid, amylase or alpha-amylase
 AN 1994-01419 BIOTECHDS
 PI JP 05294837 9 Nov 1993

L49 ANSWER 105 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI **Production of bacteriostatic oligosaccharide**
 alginate for food preservative;
 involves culturing an alginate-lyase-producing *Vibrio* sp in culture
 medium containing sodium alginate and isolating the antibiotic
 produced
 AN 1994-01571 BIOTECHDS
 PI JP 05252970 5 Oct 1993

L49 ANSWER 106 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI A method for the preparation of cello-oligosaccharide;
 cellulase pretreatment to remove beta-glucosidase activity
 AN 1993-10022 BIOTECHDS
 PI JP 05115293 14 May 1993

L49 ANSWER 107 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Fermentation accelerators containing oligosaccharides for meat products
 and manufacture of meat products with them
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 IN Shimamura, Seiichi; Tamura, Yoshitaka; Mizota, Teruhiko; Komuro, Akira
 AN 1993:515965 HCAPLUS
 DN 119:115965

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05103631	A2	19930427	JP 1991-269693	19911017
JP 2885554	B2	19990426		

L49 ANSWER 108 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Chitin **oligosaccharides**, chitin, or its partial degradation
products as bactericides and fungicides
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 IN Shimai, Yoshuki; Tsukuda, Koji; Seino, Haruyoshi
 AN 1993:471245 HCAPLUS
 DN 119:71245

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05092926	A2	19930416	JP 1991-99878	19910201

L49 ANSWER 109 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Production of brown algae decomposition prod. for oligosaccharide(s)
 production -
 by decomposing brown algae using enzymes produced by microorganisms
 belonging to genus *Alteromonas*.
 PI JP 05030988 A 19930209 (199311)* 4 C12P019-04
 JP 3079183 B2 20000821 (200043) 5 C12P019-04

L49 ANSWER 110 OF 207 MEDLINE on STN DUPLICATE 38
 TI Lipo-oligosaccharides of *Rhizobium* induce infection-related early nodulin
 gene expression in pea root hairs.
 SO Plant journal : for cell and molecular biology, (1993 Oct) 4 (4) 727-33.
 Journal code: 9207397. ISSN: 0960-7412.
 AU Horvath B; Heidstra R; Lados M; Moerman M; Spaank H P; Prome J C; van
 Kammen A; Bisseling T
 AN 94073227 MEDLINE

L49 ANSWER 111 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Structural analysis of two oligosaccharide bisphosphates isolated from the
 lipopolysaccharide of a recombinant strain of Escherichia coli F515 (Re
 chemotype) expressing the genus-specific epitope of Chlamydia
 lipopolysaccharide
 SO European Journal of Biochemistry (1993), 214(3), 703-10
 CODEN: EJBACI; ISSN: 0014-2956
 AU Holst, Otto; Broer, Wim; Thomas-Oates, Jane E.; Mamat, Uwe; Brade, Helmut
 AN 1993:535154 HCAPLUS
 DN 119:135154

L49 ANSWER 112 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
 on STN DUPLICATE 39
 TI CONTROL OF THE EXPRESSION OF BACTERIAL GENES INVOLVED IN SYMBIOTIC
 NITROGEN-FIXATION
 SO WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY, (JUL 1993) Vol. 9, No. 4,
 pp. 444-454.
 ISSN: 0959-3993.
 AU MEGIAS M (Reprint); FOLCH J L; SOUSA C
 AN 93:432530 SCISEARCH

L49 ANSWER 113 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
 on STN DUPLICATE 40
 TI RHIZOBIAL LIPO-OLIGOSACCHARIDE SIGNALS AND THEIR ROLE IN PLANT
 MORPHOGENESIS - ARE ANALOGOUS LIPOPHILIC CHITIN DERIVATIVES PRODUCED BY
 THE PLANT
 SO AUSTRALIAN JOURNAL OF PLANT PHYSIOLOGY, (1993) Vol. 20, No. 4-5, pp.
 381-392.
 ISSN: 0310-7841.
 AU SPAINK H P (Reprint); WIJFJES A H M; VANVLIET T B; KIJNE J W; LUGTENBERG B
 J J
 AN 93:637982 SCISEARCH

L49 ANSWER 114 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Effects of biosynthetic polysaccharides and oligosaccharides on intestinal
 bacteria
 SO Shipin Kexue (Taipei) (1993), 20(2), 187-97
 CODEN: SPKHE6; ISSN: 0253-8997
 AU Yang, Yaching; Tsiang, Fonglin; Chiu, Chihwei P.; Tsai, Chingmin E.
 AN 1995:281446 HCAPLUS
 DN 122:51001

L49 ANSWER 115 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Noncellulolytic fungal beta-glucanases: their physiology and regulation;
 beta-glucanase occurrence, biosynthesis, mechanism of action,
 function, purification, characterization and potential applications; a
 review
 SO Enzyme Microb. Technol.; (1993) 15, 3, 178-92
 CODEN: EMTED2
 AU Pitson S M; Seviour R J; McDougall B M
 AN 1993-04086 BIOTECHDS

L49 ANSWER 116 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Development of enzymes for chemoenzymatic synthesis;
 oligosaccharide and peptide preparation; characterization of
 enzyme-catalyzed reactions, enzyme gene cloning and enzyme
 engineering; a review (conference paper)
 SO Chimia; (1993) 47, 4, 127-32
 CODEN: CHIMAD
 AU Wong C H
 AN 1993-14752 BIOTECHDS

L49 ANSWER 117 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Determination of the structures of three bacterial polysaccharides and
 synthesis and use of new spacers for glycoconjugate formation
 SO Chemical Communications (Stockholm University) (1993), (3), 32 pp.
 CODEN: CCUSBN; ISSN: 0366-5607
 AU Anderson, Mats
 AN 1993:581091 HCAPLUS
 DN 119:181091

L49 ANSWER 118 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Development of functional food-materials utilizing enzymes and
microorganisms. Development of technology **producing**
oligosaccharides
 SO Kenkyu Hokoku - Fukuoka-ken Kogyo Gijutsu Senta (1993), Volume Date 1992,
 3, 7-12
 CODEN: KFKSEH; ISSN: 0916-8230
 AU Furuta, Masanori; Nomiyama, Syuji; Ohta, Shumei
 AN 1995:110922 HCAPLUS
 DN 122:54564

L49 ANSWER 119 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Galacto-oligosaccharide and gluconic acid preparation;
 from lactose using glucose-oxidase from Sterigmatomyces elviae,
 Sirobasidium mugnum, Rhodotorula minuta, etc.
 AN 1992-10996 BIOTECHDS
 PI JP 04144691 19 May 1992

L49 ANSWER 120 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Increased utilization of fed substrates during microbial product
 biosynthesis
 SO Ger. (East), 9 pp.
 CODEN: GEXXA8
 IN Christner, Arnulf; Helmke, Claus; Mellinger, Uwe; Heinig, Klaus
 AN 1992:233908 HCAPLUS
 DN 116:233908

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 298282	A5	19920213	DD 1988-323961	19881227

L49 ANSWER 121 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Preparation of inulinase for preparation of inulo-**oligosaccharide** - by
 culturing inulinase **producing microbe** in culture
 medium producing enzyme having high end type activity.
 PI JP 04190789 A 19920709 (199234)* 4 C12N009-24

L49 ANSWER 122 OF 207 MEDLINE on STN DUPLICATE 42
 TI Isolation and characterization of Escherichia coli mutants
 blocked in **production** of membrane-derived
oligosaccharides.
 SO Journal of bacteriology, (1992 Jul) 174 (14) 4856-9.
 Journal code: 2985120R. ISSN: 0021-9193.
 AU Weissborn A C; Rumley M K; Kennedy E P
 AN 92325085 MEDLINE

L49 ANSWER 123 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
 on STN DUPLICATE 43
 TI MUCIN DEGRADATION IN THE HUMAN COLON - PRODUCTION OF SIALIDASE, SIALATE
 O-ACETYLESTERASE, N-ACETYLNEURAMINATE LYASE, ARYLESTERASE, AND
 GLYCOSULFATASE ACTIVITIES BY STRAINS OF FECAL BACTERIA
 SO INFECTION AND IMMUNITY, (OCT 1992) Vol. 60, No. 10, pp. 3971-3978.
 ISSN: 0019-9567.
 AU CORFIELD A P (Reprint); WAGNER S A; CLAMP J R; KRIARIS M S; HOSKINS L C
 AN 92:577320 SCISEARCH

L49 ANSWER 124 OF 207 MEDLINE on STN DUPLICATE 44

TI Rhizobial lipo-oligosaccharides: answers and questions.
 SO Plant molecular biology, (1992 Dec) 20 (5) 977-86. Ref: 51
 Journal code: 9106343. ISSN: 0167-4412.
 AU Spaink H P
 AN 93099248 MEDLINE

L49 ANSWER 125 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI **Synthesis of oligosaccharides** related to plant, vertebrate, and **bacterial** cell-wall glycans
 SO Carbohydrates (1992), 188-227. Editor(s): Ogura, Haruo; Hasegawa, Akira; Suami, Tetsuo. Publisher: Kodansha, Tokyo, Japan.
 CODEN: 60URAP
 AU Pozsgay, Vince
 AN 1995:336830 HCAPLUS
 DN 122:161053

L49 ANSWER 126 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI **Oligosaccharides production** from natural polysaccharides by **microbial** depolymerizing enzymes
 SO Kagaku to Seibutsu (1992), 30(3), 170-5
 CODEN: KASEAA; ISSN: 0453-073X
 AU Tomita, Fusao; Yokota, Atsushi
 AN 1992:233785 HCAPLUS
 DN 116:233785

L49 ANSWER 127 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Development of functional food materials utilizing enzymes and **microorganisms**. Characteristics of the enzyme for **production of oligosaccharides**
 SO Kenkyu Hokoku - Fukuoka-ken Kogyo Gijutsu Senta (1992), Volume Date 1991, 2, 95-100
 CODEN: KFKSEH; ISSN: 0916-8230
 AU Furuta, Masanori; Takada, Yasuyoshi; Suenaga, Hikaru; Ohta, Shumei
 AN 1993:624730 HCAPLUS
 DN 119:224730

L49 ANSWER 128 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Cloning of Bacillus licheniformis amylase gene and its application to synthesis of branched oligosaccharides;
 oligosaccharide preparation and starch liquefaction using
 panose-forming amylase and recombinant thermostable alpha-amylase
 expressed in Escherichia coli (conference paper)
 SO Biochem.Eng.2001; (1992) 80-83
 AU Park K H; Kim I C; Kim J R; Seo B C; Choi Y D; Lee D S
 AN 1993-04106 BIOTECHDS

L49 ANSWER 129 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Isolation and characterization of alkalophilic bacteria that degrade soybean galactan;
 galacto-oligosaccharide production using galactanase-producing
 Bacillus spp. isolated from soil
 SO Agric.Biol.Chem.; (1991) 55, 5, 1399-400
 CODEN: ABCHA6
 AU Tsumura K; Hashimoto Y; Akiba T; Horikoshi K
 AN 1991-09587 BIOTECHDS

L49 ANSWER 130 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
 DUPLICATE 45
 TI STUDIES ON ENZYMATIC **PRODUCTION OF OLIGOSACCHARIDES**
 .6. MALTOTRIOSE-**PRODUCING** AMYLASE FROM **MICROBACTERIUM**
 -IMPERIALE
 SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1991) Vol. 55, No. 3, pp. 687-692.
 AU TAKASAKI Y (Reprint); KITAJIMA M; TSURUTA T; NONOBUCHI M; HAYASHI S; IMADA K

AN 91:217594 SCISEARCH

L49 ANSWER 131 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 46

TI EFFECT OF LIPOPOLYSACCHARIDE CORE SYNTHESIS MUTATIONS ON THE PRODUCTION OF
VIBRIO-CHOLERAEE O-ANTIGEN IN ESCHERICHIA-COLI K-12

SO FEMS MICROBIOLOGY LETTERS, (1991) Vol. 82, No. 3, pp. 279-286.

AU MORONA R (Reprint); BROWN M H; YEADON J; HEUZENROEDER M W; MANNING P A

AN 91:519127 SCISEARCH

L49 ANSWER 132 OF 207 MEDLINE on STN

TI Effect of lipopolysaccharide core synthesis mutations on the production of
Vibrio cholerae O-antigen in Escherichia coli K-12.

SO FEMS microbiology letters, (1991 Aug 15) 66 (3) 279-85.
Journal code: 7705721. ISSN: 0378-1097.

AU Morona R; Brown M H; Yeadon J; Heuzenroeder M W; Manning P A

AN 92120466 MEDLINE

L49 ANSWER 133 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI **Synthesis** of fructan and **oligosaccharides** by
microbial fructosyltransferases

SO Denpun Kagaku (1991), 38(2), 217-22
CODEN: DPNKAV; ISSN: 0021-5406

AU Iizuka, Masaru; Tanaka, Toshio; Yamamoto, Satoru; Yoneda, Yukio; Itokawa,
Shigekazu; Hiyama, Masato; Ito, Kazuo; Furuichi, Kimiaki; Minamiura,
Noshi; Yamamoto, Takehiko

AN 1991:678091 HCAPLUS

DN 115:278091

L49 ANSWER 134 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Degradation and utilization of xylan by a genetically modified
Bacteroides thetaiotaomicron and in combination with selected ruminal
bacteria;
Bacteroides ruminicola recombinant endo-1,4-beta-D-xylanase
production; hemicellulose, xylan hydrolysis, xylo-
oligosaccharide end-**product** utilization by rumen
bacterium (conference abstract)

SO Abstr.Gen.Meet.Am.Soc.Microbiol.; (1991) 91 Meet., 202

AU Cotta M A; Whitehead T R

AN 1991-11885 BIOTECHDS

L49 ANSWER 135 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI Apparatus for producing immobilized cell;
cell immobilization apparatus for cell mixing with support and
pressurized injection through needle for bead formation; potential
application fructo-oligosaccharide production

AN 1991-15095 BIOTECHDS

PI KR 9005528 31 Jul 1990

L49 ANSWER 136 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI Galacto-oligosaccharide production - by allowing microbe of Rhodotorula,
sterigmatomyces or sirobasidium to act on lactose to generate
galacto-oligo-saccharide and extracting it.

PI JP 02072890 A 19900313 (199016)*
JP 2600874 B2 19970416 (199720) 3 C12P019-00

L49 ANSWER 137 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN

TI **SYNTHESIS OF OLIGOSACCHARIDES** RELATED TO
BACTERIAL O-ANTIGENS.

SO Top. Curr. Chem., (1990) pp. 1-38. THIEM, J. (ED.). TOPICS IN CURRENT
CHEMISTRY, VOL. 154. CARBOHYDRATE CHEMISTRY. VII+334P. SPRINGER-VERLAG:
BERLIN, WEST GERMANY; NEW YORK, NEW YORK, USA. ILLUS.
Publisher: Series: Topics in Current Chemistry.

CODEN: TPCCAQ. ISSN: 0340-1022. ISBN: 3-540-51576-3, 0-387-51576-3.

AU BUNDLE D R [Reprint author]
AN 1990:401311 BIOSIS

L49 ANSWER 138 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Cloning and expression in Escherichia coli of a Haemophilus influenzae
type b lipooligosaccharide synthesis gene(s) that encodes a
2-keto-3-deoxyoctulosonic acid epitope
SO Infection and Immunity (1990), 58(6), 1558-64
CODEN: INFIBR; ISSN: 0019-9567
AU Spinola, Stanley M.; Kwaik, Yousef Abu; Lesse, Alan J.; Campagnari,
Anthony A.; Apicella, Michael A.
AN 1990:527265 HCAPLUS
DN 113:127265

L49 ANSWER 139 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI **Synthesis of oligosaccharides** by use of
microbial enzymes
SO Denpun Kagaku (1990), 37(2), 59-67
CODEN: DPNKAV; ISSN: 0021-5406
AU Kitahata, Sumio
AN 1990:570336 HCAPLUS
DN 113:170336

L49 ANSWER 140 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Biotechnological and chemical routes to intermediate synthesis products
from sucrose
SO Zuckerindustrie (Berlin, Germany) (1990), 115(1), 20-4
CODEN: ZUCKDI; ISSN: 0344-8657
AU Buchholz, Klaus; Kunz, Markwart
AN 1990:404553 HCAPLUS
DN 113:4553

L49 ANSWER 141 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 47
TI **SYNTHESIS OF OLIGOSACCHARIDES** RELATED TO
BACTERIAL O-ANTIGENS
SO TOPICS IN CURRENT CHEMISTRY, (1990) Vol. 154, pp. 1-37.
AU BUNDLE D R (Reprint)
AN 90:478880 SCISEARCH

L49 ANSWER 142 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 48
TI Plant culture with growth accelerators prepared from polysaccharides of
microbial cultures
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
IN Adachi, Takashi; Ishii, Takafumi; Hidaka, Hidemasa
AN 1990:72298 HCAPLUS
DN 112:72298

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01079101	A2	19890324	JP 1987-234755	19870921
	JP 07106966	B4	19951115		

L49 ANSWER 143 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI **Production of oligosaccharide** using dextransucrase
producer bacteria e.g. Streptococcus bovis;
culture medium effect
AN 1989-12709 BIOTECHDS
PI JP 01148195 9 Jun 1989

L49 ANSWER 144 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Enzymatic production of cello oligosaccharide - involves removing inhibition
of prod. using ultrafiltration of culture medium containing Celluibrio

microorganism.

PI JP 01256394 A 19891012 (198947)* 4
 US 4908311 A 19900313 (199016)
 JP 05083238 B 19931125 (199350) 3 C12P019-14

L49 ANSWER 145 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Enzymic preparation of N-acetyl chito-oligosaccharide - by culturing microbe of trichoderma which produces chitinase, etc..
 PI JP 01174383 A 19890710 (198933)* 7
 JP 07089922 B2 19951004 (199544) 5 C12N009-42

L49 ANSWER 146 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
 TI MECHANISMS INVOLVED IN WOUND HEALING D GLUCOSE POLYSACCHARIDE ACTION.
 SO FASEB Journal, (1989) Vol. 3, No. 4, pp. A1251.
 Meeting Info.: 73RD ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY, NEW ORLEANS, LOUISIANA, USA, MARCH 19-23, 1989.
 FASEB (FED AM SOC EXP BIOL) J.
 CODEN: FAJOEC. ISSN: 0892-6638.
 AU SILVETTI A N [Reprint author]
 AN 1989:324650 BIOSIS

L49 ANSWER 147 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Production of galactooligosaccharides by microbial enzymes
 SO Kagaku to Kogyo (Osaka, Japan) (1989), 63(10), 407-15
 CODEN: KKGOAG; ISSN: 0368-5918
 AU Nakano, Hirofumi
 AN 1990:34334 HCAPLUS
 DN 112:34334

L49 ANSWER 148 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI **Synthesis of oligosaccharides by microbial enzymes**
 SO Kagaku to Kogyo (Osaka, Japan) (1989), 63(4), 161-9
 CODEN: KKGOAG; ISSN: 0368-5918
 AU Kitahata, Sumio
 AN 1989:493061 HCAPLUS
 DN 111:93061

L49 ANSWER 149 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
 TI **MICROBIAL ENZYMES THAT PRODUCE SPECIFIC OLIGOSACCHARIDES**
 SO ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (1989) Vol. 198, No. SEP, pp. 42-CARB.
 AU PRIEST F G (Reprint)
 AN 90:346637 SCISEARCH

L49 ANSWER 150 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Application of soybean oligosaccharides
 SO New Food Industry (1989), 31(6), 33-8
 CODEN: NYFIAM; ISSN: 0547-0277
 AU Kawaguchi, Hiroshi
 AN 1989:532648 HCAPLUS
 DN 111:132648

L49 ANSWER 151 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI **Microbial enzymes that produce specific oligosaccharides;**
 oligosaccharide preparation by starch saccharification (conference abstract)
 SO Abstr.Pap.Am.Chem.Soc.; (1989) 198 Meet., CARB42
 CODEN: ACSRAL
 AU Priest F G

AN 1990-00411 BIOTECHDS

L49 ANSWER 152 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Malto-oligosaccharide-forming amylase production - by culturing *Bacillus*
bacteria producing amylase and recovering malto-
oligosaccharide.

PI JP 63237786 A 19881004 (198845)* 9
JP 2559400 B2 19961204 (199702) 7 C12N009-26

L49 ANSWER 153 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Lactic acid bacteria breeding accelerator - contains chitosan
oligosaccharide, and is useful for production of dairy products.

PI JP 63098379 A 19880428 (198823)* 9
JP 04063674 B 19921012 (199245) 9 C12N001-38

L49 ANSWER 154 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Sweetener oligosaccharide(s) production - comprises treating lactose with at
least two kinds of beta-galactosidase(s) from different microorganisms.

PI EP 263700 A 19880413 (198815)* EN 7
R: CH DE FR GB IT LI NL SE
JP 63091092 A 19880421 (198822)
AU 8779343 A 19880414 (198823)
US 4895801 A 19900123 (199011) 4
CA 1307755 C 19920922 (199244) C12P019-04
EP 263700 B1 19921230 (199301) EN 9 C12P019-14
R: CH DE FR GB IT LI NL SE
DE 3783303 G 19930211 (199307) C12P019-14
JP 05022516 B 19930329 (199315) 4 C12P019-14
KR 9309085 B1 19930922 (199436) C12P019-00
EP 263700 B2 19970502 (199722) EN 7 C12P019-14
R: CH DE FR GB IT LI NL SE

IN KAN, T; KOBAYASHI, Y; TERASHIMA, T

L49 ANSWER 155 OF 207 MEDLINE on STN DUPLICATE 50
TI Degradation of human intestinal glycosphingolipids by extracellular
glycosidases from mucin-degrading bacteria of the human fecal flora.
SO Journal of biological chemistry, (1988 Aug 5) 263 (22) 10790-8.
Journal code: 2985121R. ISSN: 0021-9258.
AU Larson G; Falk P; Hoskins L C
AN 88273201 MEDLINE

L49 ANSWER 156 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Selection of microorganisms which produce raw-starch degrading enzymes;
isolation of *Bacillus*, *Aspergillus* and *Hansenula* spp. producing
alpha-amylase and/or glucoamylase

SO Appl.Microbiol.Biotechnol.; (1988) 27, 5-6, 443-46
CODEN: EJABDD
AU Bergmann F W; Abe J; Hizukuri S
AN 1988-07243 BIOTECHDS

L49 ANSWER 157 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Transglycosylase and hydrolase activities of carbohydrases;
e.g. lysozyme, alpha-amylase, dextranase and glucoamylase; a review
SO Prikl.Biokhim.Mikrobiol.; (1988) 24, 3, 291-304
CODEN: PBMIK

AU Maksimov V I
AN 1988-08210 BIOTECHDS

L49 ANSWER 158 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI **Synthesis** of functional **oligosaccharides** by
microbial enzymes

SO Gekkan Fudo Kemikaru (1988), 4(6), 70-4
CODEN: GFKEEX; ISSN: 0911-2286
AU Kitahata, Sumio

AN 1988:547881 HCAPLUS
DN 109:147881

L49 ANSWER 159 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 52

TI SPECTROSCOPIC ANALYSIS OF THE **OLIGOSACCHARIDES PRODUCED**
BY **BACTERIOPHAGE**-BORNE ENZYME ACTION ON KLEBSIELLA-K36
POLYSACCHARIDE

SO SOUTH AFRICAN JOURNAL OF CHEMISTRY, (1988)-Vol. 41, No. 2, pp. 42-47.

AU RAVENSCROFT N; JACKSON G E; JOAO H; STEPHEN A M (Reprint)

AN 88:402485 SCISEARCH

L49 ANSWER 160 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

TI The identification of lipopolysaccharide producing microorganisms;
hybridoma construction for monoclonal antibody secretion, application
for Gram-negative bacterium detection

AN 1987-11961 BIOTECHDS

PI US 4683196 28 Jul 1987

L49 ANSWER 161 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Foliar liquid fertilizers from wastewaters

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

AN 1990:6719 HCAPLUS

DN 112:6719

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62283906	A2	19871209	JP 1986-124865	19860530

L49 ANSWER 162 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Manufacture of chondroitinsulfuric acid hydrolysates by immobilized
bacteria

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

IN Kimura, Hikari; Murata, Kosaku; Nonaka, Michio; Sato, Nobuyuki

AN 1987:552866 HCAPLUS

DN 107:152866

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62130696	A2	19870612	JP 1985-270745	19851203
JP 05058716	B4	19930827		

L49 ANSWER 163 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI Malto pentose preparation - by acid hydrolysis of cyclodextrin then treatment
with amylase derived from Bacillus spp..

PI JP 62208294 A 19870912 (198742)* 4

L49 ANSWER 164 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI The synthesis of the heptose region of the gram-negative bacterial core
oligosaccharides

SO Tetrahedron Letters (1987), 28(14), 1569-72

CODEN: TELEAY; ISSN: 0040-4039

AU Dziewiszek, Krzysztof; Banaszek, Anna; Zamojski, Aleksander

AN 1987:637165 HCAPLUS

DN 107:237165

L49 ANSWER 165 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 53

TI METHYLATION ANALYSIS OF THE **OLIGOSACCHARIDES PRODUCED**
BY **BACTERIOPHAGE**-BORNE ENZYME ACTION ON KLEBSIELLA K-36
POLYSACCHARIDE

SO SOUTH AFRICAN JOURNAL OF SCIENCE, (1987) Vol. 83, No. 9, pp. 560.

AU DUTTON G G S (Reprint); MACKIE K L; MERRIFIELD E H; RAVENSCROFT N; STEPHEN
A M

AN 87:634267 SCISEARCH

L49 ANSWER 166 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Commercial polysaccharides: recent trends and developments;
 polysaccharide production; a review (conference paper)
 SO Prog.Biotechnol.; (1987) 3, 311-35
 AU Yalpani M; Sandford P A
 AN 1989-00990 BIOTECHDS

L49 ANSWER 167 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI A novel lyase acting on gellan gum;
 produced by Pseudomonas elodea, enzyme characterization (conference
 abstract)
 SO Eur.Congr.Biotechnol.; (1987) Vol.2, 176
 AU Schmedding D J M; van den Dool R T M; Kerkenaar A
 AN 1989-07786 BIOTECHDS

L49 ANSWER 168 OF 207 LIFESCI COPYRIGHT 2005 CSA on STN DUPLICATE 54
 TI The identification of oral microbial lectins by cell affinity
 chromatography.
 SO FEMS MICROBIOL. LETT., (1987) vol. 40, no. 1, pp. 123-127.
 AU Murray, P.A.; Materese, V.; Hoover, C.I.; Winkler, J.R.
 AN 87:69325 LIFESCI

L49 ANSWER 169 OF 207 MEDLINE on STN DUPLICATE 55
 TI Genetic and biochemical analysis of Shigella dysenteriae 1 O antigen
 polysaccharide biosynthesis in Escherichia coli K-12: 9 kb plasmid of S.
 dysenteriae 1 determines addition of a galactose residue to the
 lipopolysaccharide core.
 SO Microbial pathogenesis, (1986 Jun) 1 (3) 299-306.
 Journal code: 8606191. ISSN: 0882-4010.
 AU Sturm S; Jann B; Jann K; Fortnagel P; Timmis K N
 AN 89237814 MEDLINE

L49 ANSWER 170 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI A method for **producing** fructo-oligosaccharide by
 immobilized **microorganism**;
 sucrose conversion to inulin-type compounds using immobilized
 Aureobasidium sp.
 AN 1985-06600 BIOTECHDS
 PI JP 60041497 5 Mar 1985

L49 ANSWER 171 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Fructo-oligosaccharide production - by fermentation with an Aureobasidium
 microorganism.
 PI JP 60027395 A 19850212 (198512)* 11
 JP 05004071 B 19930119 (199306) 13 C12P019-04

L49 ANSWER 172 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 STN DUPLICATE 57
 TI FORMATION OF OLIGOSACCHARIDES DURING HYDROLYSIS OF LACTOSE IN MILK USING
 BETA GALACTOSIDASE FROM BACILLUS-CIRCULANS.
 SO Journal of Food Science, (1985) Vol. 50, No. 6, pp. 1602-1606.
 CODEN: JFDSAZ. ISSN: 0022-1147.
 AU MOZAFFAR Z [Reprint author]; NAKANISHI K; MATSUNO R
 AN 1986:131857 BIOSIS

L49 ANSWER 173 OF 207 MEDLINE on STN DUPLICATE 58
 TI Mutant of Escherichia coli deficient in osmoregulation of
 periplasmic **oligosaccharide synthesis**.
 SO Journal of bacteriology, (1985 Mar) 161 (3) 1049-53.
 Journal code: 2985120R. ISSN: 0021-9193.
 AU Clark D P
 AN 85130782 MEDLINE

L49 ANSWER 174 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Novel oligosaccharides obtained by bacteriophage degradation of the
 polysaccharide from Klebsiella serotype K26
 SO Carbohydrate Research (1985), 144(2), 251-62
 CODEN: CRBRAT; ISSN: 0008-6215
 AU Di Fabio, Jose L.; Karunaratne, D. Nedra; Dutton, Guy G. S.
 AN 1986:497844 HCAPLUS
 DN 105:97844

L49 ANSWER 175 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Gelling agent of non-branched polygalactan and metallic oxides;
 especially aluminum silicon and titanium oxides is used to replace
 agar in microorganism culture medium
 AN 1984-11500 BIOTECHDS
 PI EP 118376 12 Sep 1984

L49 ANSWER 176 OF 207 MEDLINE on STN DUPLICATE 59
 TI Regulation of the **synthesis** of membrane-derived
oligosaccharides in Escherichia coli. Assay of
 phosphoglycerol transferase I in vivo.
 SO Journal of biological chemistry, (1984 Jul 10) 259 (13) 8388-93.
 Journal code: 2985121R. ISSN: 0021-9258.
 AU Bohin J P; Kennedy E P
 AN 84239819 MEDLINE

L49 ANSWER 177 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
 on STN DUPLICATE 60
 TI **SYNTHESIS** OF MORAPRENYL PYROPHOSPHATE **OLIGOSACCHARIDES**
 - POSSIBLE BIOSYNTHETIC PRECURSORS OF ESCHERICHIA-COLI 08 AND 09
 O-ANTIGENS
 SO BIOORGANICHESKAYA KHIMIYA, (1984) Vol. 10, No. 7, pp. 946-953.
 AU TORGOV V I (Reprint); SHIBAEV V N; KOCHETKOV N K
 AN 84:504794 SCISEARCH

L49 ANSWER 178 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Synthesis of repeating units of Escherichia coli capsular polysaccharides
 containing D-ribose and 3-deoxy-D-manno-2-octulosonic acid (KDO)
 SO Carbohydrate Research (1984), 132(2), 261-74
 CODEN: CRBRAT; ISSN: 0008-6215
 AU Kosma, Paul; Schulz, Gerhard; Unger, Frank M.
 AN 1985:62532 HCAPLUS
 DN 102:62532

L49 ANSWER 179 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Mucin degradation by enteric bacteria: ecological aspects and
 implications for bacterial attachment to gut mucosa
 SO Attachment Org. Gut Mucosa, [Pap. Res. Workshop] (1984), Volume 2, 51-67.
 Editor(s): Boedeker, Edgar C. Publisher: CRC, Boca Raton, Fla.
 CODEN: 52SOA7
 AU Hoskins, Lansing C.
 AN 1985:594094 HCAPLUS
 DN 103:194094

L49 ANSWER 180 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 TI Oligosaccharide preparation - by treating starch, amylase or amylopectin
 (hydrolysate) with amylase obtd. from Bacillus e.g. circulans G 4,5 FERM
 p-6237.
 PI JP 58170492 A 19831007 (198346)* 7
 JP 59004119 B 19840127 (198408)

L49 ANSWER 181 OF 207 MEDLINE on STN DUPLICATE 61
 TI Appearance of monoglyceride and triglyceride in the cell envelope of
 Escherichia coli mutants defective in diglyceride kinase.

SO Journal of biological chemistry, (1983 Jul 10) 258 (13) 8068-73.
Journal code: 2985121R. ISSN: 0021-9258.

AU Rotering H; Raetz C R
AN 83238407 MEDLINE

L49 ANSWER 182 OF 207 MEDLINE on STN DUPLICATE 62
TI Structure of the core regions in lipopolysaccharides from Escherichia coli K12 W2252-11U-, the Ter-15 mutant, and Ter-15 (F'-lac) and Ter-15 (F+) cells.

SO Biochimica et biophysica acta, (1983 Apr 20) 756 (3) 335-40.
Journal code: 0217513. ISSN: 0006-3002.

AU Ohkawa T
AN 83153817 MEDLINE

L49 ANSWER 183 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Saccharides as physiologically active hypoglycemic (antidiabetic) agents; derived from **microbially-produced** polysaccharides and **oligosaccharides**

AN 1982-03991 BIOTECHDS
PI JP 57146713 10 Sep 1982

L49 ANSWER 184 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Solubilisation, modification and hydrolysis of carbohydrate(s) - by treatment with aqueous acid and magnesium, calcium or lithium salt.

PI EP 44622 A 19820127 (198205)* EN 51
R: AT CH DE FR GB LI SE
NO 8102358 A 19820208 (198209)
BR 8104434 A 19820330 (198215)
JP 57048997 A 19820320 (198217)
ZA 8104472 A 19820705 (198238)
EP 44622 B 19850821 (198534) EN
R: AT CH DE FR GB LI SE
CA 1192541 A 19850827 (198539)
DE 3171911 G 19850926 (198540)
SU 1318171 A 19870615 (198805)
US 4713118 A 19871215 (198806)
US 4787939 A 19881129 (198850)
JP 01033113 B 19890711 (198931)

IN BARKER, S A; SOMERS, P J

L49 ANSWER 185 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Enzyme mixtures for production of oligosaccharides
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

AN 1981:478483 HCAPLUS
DN 95:78483

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56051982	A2	19810509	JP 1979-127979	19791005

L49 ANSWER 186 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 63
TI COMPARATIVE STUDY OF HOST CAPSULE DEPOLYMERASES ASSOCIATED WITH KLEBSIELLA BACTERIO PHAGES.

SO Virology, (1981) Vol. 113, No. 1, pp. 363-378.
CODEN: VIRLAX. ISSN: 0042-6822.

AU RIEGER-HUG D [Reprint author]; STIRM S
AN 1982:154584 BIOSIS

L49 ANSWER 187 OF 207 LIFESCI COPYRIGHT 2005 CSA on STN
TI Comparative Study of Host Capsule Depolymerases Associated With Klebsiella Bacteriophages.

SO VIROLOGY., (1981) vol. 113, no. 1, pp. 363-378.
AU Stirm, S.; Rieger-Hug, D.

AN 81:33613 LIFESCI

L49 ANSWER 188 OF 207 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS
RESERVED. on STN

TI Comparative study of host capsule depolymerases associated with Klebsiella
bacteriophages.

SO Behavioural Brain Research, (1981) Vol. 3, No. 2, pp. 363-378.
CODEN: BBREDI

AU Rieger-Hug D.; Stirm S.

AN 81201970 EMBASE

L49 ANSWER 189 OF 207 MEDLINE on STN DUPLICATE 64

TI Synthesis of 2-methyl-[2-acetamido-4-O-acetyl-6-O-benzyl-3-O-(2-butenyl)-
1,2-dideoxy-alpha-D -glucopyrano]-[2,1-d]-2-oxazoline, a versatile
intermediate for the **synthesis** of complex
oligosaccharides of **bacterial** cell-wall, human milk, and
blood-group substances.

SO Carbohydrate research, (1981 Mar 2) 89 (2) 279-88.
Journal code: 0043535. ISSN: 0008-6215.

AU Durette P L; Meitzner E P

AN 81210068 MEDLINE

L49 ANSWER 190 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 65

TI MUCIN DEGRADATION IN HUMAN COLON ECOSYSTEMS EVIDENCE FOR THE EXISTENCE AND
ROLE OF BACTERIAL SUB POPULATIONS PRODUCING GLYCOSIDASES AS EXTRACELLULAR
ENZYMES.

SO Journal of Clinical Investigation, (1981) Vol. 67, No. 1, pp. 163-172.
CODEN: JCINAO. ISSN: 0021-9738.

AU HOSKINS L C [Reprint author]; BOULDING E T

AN 1981:232852 BIOSIS

L49 ANSWER 191 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI Galactose-containing oligosaccharide A preparation - by cultivating suitable
microorganism of genus Bacillus.

PI JP 55108887 A 19800821 (198040)*
JP 56047190 B 19811107 (198149)

L49 ANSWER 192 OF 207 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

TI Bifido bacterium multiplication-promoting agent - containing oligosaccharide
prepared by treating lactose with beta-glucosidase produced by Aspergillus
oryzae.

PI JP 55104885 A 19800811 (198039)*
GB 2080330 A 19820203 (198205)
DE 3027731 A 19820204 (198206)
FR 2488137 A 19820212 (198211)
NL 8004210 A 19820216 (198211)
BR 8004937 A 19820406 (198216)
DE 3027731 C 19820722 (198230)
JP 58020266 B 19830422 (198320)
US 4435389 A 19840306 (198412)
CA 1165706 A 19840417 (198420)
GB 2080330 B 19841003 (198440)
JP 35041449 B 19850305 (198515)
CH 649002 A 19850430 (198521)
KR 8600065 A 19860206 (198640)
NL 181115 B 19870116 (198706)
JP 63018457 B 19880419 (198819)
IT 1141607 B 19861001 (198826)

L49 ANSWER 193 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Synthesis of α -L-Rhap-(1 \rightarrow 3)-L-Rha and α -L-Rhap-(1
 \rightarrow 3)- α -L-Rhap-(1 \rightarrow 3)-L-Rha building stones of
bacterial polysaccharides

SO Symp. Pap. - IUPAC Int. Symp. Chem. Nat. Prod., 11th (1978), Volume 3,
73-6
CODEN: 41RTAX
AU Pozsgay, Vince; Nanasi, Pal
AN 1980:42276 HCAPLUS
DN 92:42276

L49 ANSWER 194 OF 207 MEDLINE on STN DUPLICATE 66
TI Relation of turnover of membrane phospholipids to **synthesis** of
membrane-derived **oligosaccharides** of *Escherichia coli*.
SO Journal of biological chemistry, (1977 Jun 25) 252 (12) 4250-5.
Journal code: 2985121R. ISSN: 0021-9258.
AU Schulman H; Kennedy E P
AN 77187939 MEDLINE

L49 ANSWER 195 OF 207 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN
TI ANTIGEN DEGRADATION IN HUMAN COLON ECOSYSTEMS HOSTS ABO BLOOD TYPE
INFLUENCES ENTERIC BACTERIAL DEGRADATION OF A CELL SURFACE ANTIGEN ON
ESCHERICHIA-COLI O-86.
SO Gastroenterology, (1977) Vol. 73, No. 1, pp. 37-41.
CODEN: GASTAB. ISSN: 0016-5085.
AU CROMWELL C L [Reprint author]; HOSKINS L C
AN 1978:140610 BIOSIS

L49 ANSWER 196 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Oligosaccharides
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
IN Okada, Shigetaka; Tsuyama, Naoto; Mitsuhashi, Masakazu; Ogasawara, Junsuke
AN 1974:131677 HCAPLUS
DN 80:131677

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 48098093	A2	19731213	JP 1972-31619	19720331
	JP 56004238	B4	19810129		

L49 ANSWER 197 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Interference with **bacterial** cell wall **synthesis** by
oligosaccharide antibiotics
SO Bollettino - Societa Italiana di Biologia Sperimentale (1970), 46(5),
233-7
CODEN: BSIBAC; ISSN: 0037-8771
AU Bertazzoni, E.; Berti, Tito
AN 1970:506481 HCAPLUS
DN 73:106481

L49 ANSWER 198 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI In vitro synthesis of oligosaccharides by three "fruit rot" fungi
SO Proceedings - Indian Academy of Sciences, Section B (1970), 71(4), 171-6
CODEN: PISBAA; ISSN: 0370-0097
AU Kapoor, I. J.; Tandon, Ram N.
AN 1970:484877 HCAPLUS
DN 73:84877

L49 ANSWER 199 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Decomposition products of enzymic starch hydrolysis
SO Proceedings of the Annual Congress - South African Sugar Technologists'
Association (1970), 44, 94-7
CODEN: PSATAA; ISSN: 0373-045X
AU Bruijn, J.
AN 1971:553165 HCAPLUS
DN 75:153165

L49 ANSWER 200 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of oligosaccharides by growing culture of *Leuconostoc mesenteroides*. IV. Oligosaccharide formation in the presence of various types of glucobioses as acceptors
SO Agricultural and Biological Chemistry (1969), 33(9), 1295-300
CODEN: ABCHA6; ISSN: 0002-1369
AU Yamauchi, Fumio; Ohwada, Yhuji
AN 1969:488712 HCAPLUS
DN 71:88712

L49 ANSWER 201 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Quantitative chromatography of homologous glucose oligomers and other saccharides using polyacrylamide gel
SO Journal of Chromatography (1969), 42(4), 476-84
CODEN: JOCRAM; ISSN: 0021-9673
AU John, Michael; Trenel, Goetz; Dellweg, Hanswerner
AN 1969:488266 HCAPLUS
DN 71:88266

L49 ANSWER 202 OF 207 MEDLINE on STN DUPLICATE 67
TI Novel heparin degradation products. Isolation and characterization of novel disaccharides and **oligosaccharides produced** from heparin by **bacterial** degradation.
SO Biochemical journal, (1968 Jul) 108 (4) 647-54.
Journal code: 2984726R. ISSN: 0264-6021.
AU Dietrich C P
AN 68361894 MEDLINE

L49 ANSWER 203 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Fundamental processes in the synthesis of oligo- and polysaccharides by **microorganisms**. I. **Synthesis of oligosaccharides**. II. **Synthesis of polysaccharides**
SO Mikrobiol. Zh., Akad. Nauk Ukr. RSR (1961), 23(No. 4;No. 5), 58-62;65-70
AU Novikova, S. I.
AN 1962:68895 HCAPLUS
DN 56:68895
OREF 56:13329h-i

L49 ANSWER 204 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI **Synthesis of oligosaccharides by microbial enzymes**
SO (1960) 44 pp. Avail.: Univ. Microfilms (Ann Arbor, Mich.), Order No. 60-4506
From: Dissertation Abstr. 21, 1333
AU Marsh, Jean M.
AN 1961:28400 HCAPLUS
DN 55:28400
OREF 55:5643d-e

L49 ANSWER 205 OF 207 MEDLINE on STN DUPLICATE 68
TI Carbohydrate metabolism of *coli* group **bacteria**. IV. **Oligosaccharide synthesis** from sucrose by *Esch. coli* var. *communior*.
SO Japanese journal of medical science & biology, (1954 Feb) 7 (1) 1-13.
Journal code: 0243706. ISSN: 0021-5112.
AU MOROOKA N
AN 55022750 MEDLINE

L49 ANSWER 206 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
TI **Oligosaccharides synthesized** from maltose by *Escherichia coli*
SO Journal of the Chemical Society, Abstracts (1952) 209-15
CODEN: JCSAAZ; ISSN: 0590-9791
AU Barker, S. A.; Bourne, E. J.

AN 1952:54533 HCAPLUS
DN 46:54533
OREF 46:9065h-i

L49 ANSWER 207 OF 207 MEDLINE on STN
TI The **oligosaccharides synthesized** by *Escherichia coli* from maltose.
SO Biochemical journal, (1951 Sep) 49 (4) lxi.
Journal code: 2984726R. ISSN: 1470-8728.
AU BARKER S A; BOURNE E J
AN 52016452 MEDLINE

=>

=> d ab 4,5,7,8,20,22,28-32,36,39,40,46,55,58,95

L49 ANSWER 4 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN
AB A review with 52 refs. is presented regarding methods developed for the **production** of heterologous **oligosaccharides** by recombinant **bacteria**. Topics discussed include the concept and methodol. of heterologous recombinant **oligosaccharide production** in *Escherichia coli*, and examples of recombinant oligosaccharides. The work presented represents the first few steps towards the **production** of tailored **oligosaccharides** in *E. coli*

L49 ANSWER 5 OF 207 MEDLINE on STN DUPLICATE 2
AB Rapid advances in the cloning and expression of glycosyltransferase genes, especially from bacteria, could open the way to overcoming difficulties in the mass production of oligosaccharides. The large-scale production of oligosaccharides using either glycosyltransferases isolated from engineered microorganisms or whole cells as an enzyme source could promote a new era in the field of carbohydrate synthesis.

L49 ANSWER 7 OF 207 MEDLINE on STN DUPLICATE 3

L49 ANSWER 8 OF 207 MEDLINE on STN DUPLICATE 4
AB A large-scale production system of cytidine 5'monophospho-N-acetylneuraminic acid (CMP-NeuAc) and sialylloligosaccharides was established by a whole-cell reaction through the combination of recombinant *Escherichia coli* strains and *Corynebacterium ammoniac*-genes. For the production of CMP-NeuAc, two recombinant *E. coli* strains were generated that overexpressed the genes of CMP-NeuAc synthetase and CTP synthetase, respectively. *C. ammoniac* genes contributed to the formation of UTP from orotic acid. CMP-NeuAc was accumulated at 27 mM (17 g/l) after a 27-h reaction starting with orotic acid and N-acetylneuraminic acid. When *E. coli* cells that overexpressed the alpha-(2-->3)-sialyltransferase gene of *Neisseria gonorrhoeae* were put into the CMP-NeuAc production system, 3'-sialyllactose was accumulated at 52 mM (33 g/l) after an 11-h reaction starting with orotic acid, N-acetylneuraminic acid, and lactose. Almost no oligosaccharide byproducts other than 3'-sialyllactose were observed after the reaction. The production of 3'-sialyllactose at a 5-l jar fermenter scale was almost the same as that at a beaker scale, which indicated the high potential of the 3'-sialyllactose production on an industrial scale.

L49 ANSWER 20 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
AB The gene (gale) encoding UDP-galactose-4-epimerase was cloned (plasmid pET15b-gale) into *Escherichia coli* BL21(DE3) from the chromosomal DNA of *E. coli* K-12. High expression of the soluble recombinant epimerase was achieved in the cell lysate. In order to evaluate the use of this enzyme in the synthesis of alpha-Gal epitopes (oligosaccharides with a terminal Gal-alpha-1,3-Gal sequence), a new radioactivity assay (alpha-1,3-galactosyltransferase coupled assay) was established to

characterize its activity in producing UDP-galactose from UDP-glucose. About 2,700 U (100 mg) enzyme with a specific activity of 27 U/mg protein could be obtained from 1 l of bacterial culture. Cultures were carried out at 37 deg, 250 rpm for 3 hr in Luria-Bertani medium. The epimerase was active in a wide pH range with an optimum at pH 7. This expression system established a viable route to the enzymatic production of alpha-Gal oligosaccharides to support xenotransplantation research. (13 ref)

L49 ANSWER 22 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
AB There is an increasing market for health-promoting microbial food supplements, probiotics and health promoting non-digestible food ingredients (prebiotics). A genomic library of *Bifidobacterium adolescentis* DSM 20083 was constructed in *Escherichia coli* XL1-Blue MRF' and a gene encoding an alpha-galactosidase (EC-3.2.1.22) was isolated. The identified open reading frame showed high similarity and identity with bacterial alpha-galactosidases, which belong to Family 36 of the glycosyl hydrolases. The transformed *E. coli* was grown for 24 hr in M9 medium supplemented with 1 mg thiamine/ml, 1 mM IPTG and 50 ug ampicillin/ml. The broth was centrifuged and the supernatant was diluted 1:1 with water. For purification of the enzyme from the medium, a single chromatography step on Q-Sepharose was sufficient. The yield of the recombinant enzyme was 100-fold higher than from *B. adolescentis* itself. As well as hydrolytic activity, the alpha-galactosidase had transglycosylation activity and could be used for production of alpha-galacto-oligosaccharides. (18 ref)

L49 ANSWER 28 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 12
AB Structure-comparisons of glycosyltransferases is hampered by the absence of extended sequence conservations. Only short regions of limited homology have been reported for groups of closely-related transferases such as the beta-galactosyltransferase family, the sialyltransferases, and the beta-polysaccharide synthases: a group of glycosyltransferases involved in the synthesis of linear polysaccharides that consist of beta-linked saccharides. Examples of such enzymes are chitin synthase, cellulose synthase, hyaluronic acid synthase, and the bacterial NodC protein which synthesizes chitin oligosaccharides. In this paper we summarize the known functional aspects of this group of transferases, and possible links with structural aspects. We have found that all members contain six short sequences which are conserved throughout this family. Site-directed mutagenesis studies reported in literature have shown that the conserved residues in these conserved beta-polysaccharide synthase regions are important, or even essential for enzyme activity. Since a detailed study of these mutants with regard to nucleotide-sugar binding or glycosyl acceptor binding has not been reported, the data generated by these studies do not provide information about the precise roles of the conserved beta-polysaccharide synthase regions in substrate-binding and catalysis. However, we report that a novel motif, conserved in all members of this beta-polysaccharide synthase family, is homologous to known nucleotide-binding motifs in nucleoside-triphosphate-binding proteins. In addition we present a sequence analysis that indicates putative functions for the conserved regions in the beta-polysaccharide synthase family in substrate-specificity, catalysis, and product chain-length control.

L49 ANSWER 29 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 13
AB Rhizobial bacteria synthesize lipo-chitin oligosaccharide signal molecules (Nod factors) that are essential for the formation of symbiotic organs on the roots of host plants, a process known as nodulation. Biosynthesis of the chitin oligosaccharide moiety in Nod factors is carried out by the rhizobial N-acetylglucosaminyltransferase NodC. The initial acceptor or primer used

for the synthesis of chitin oligosaccharides in vivo is unknown. To investigate the acceptor specificity of NodC, we have synthesized derivatives of N-acetylglucosamine (GlcNAc) with different aglycones and tested whether they are accepters for NodC in vitro using a membrane preparation of an *Escherichia coli* strain expressing the *Mesorhizobium loti* chitin oligosaccharide synthase NodC. Analysis of reaction products using thin-layer chromatography shows that GlcNAc derivatives containing simple alkyl chains or other hydrophobic groups linked to C-1 are accepters for NodC. The enzyme appears to be specific for accepters in which the aglycone is beta-linked. GlcNAc derivatives in which the methyl group of the N-acetyl moiety of GlcNAc is replaced by an allyloxy or benzyloxy group are still used as accepters by NodC. The original methyl group at this position therefore does not appear to be essential for the interaction between NodC and GlcNAc. A NodC-dependent reaction product that is more hydrophobic than GlcNAc was detected in reaction mixtures containing 5% methanol but lacking an exogenously added acceptor. This may be due to the presence of a natural hydrophobic glycosyl acceptor for NodC in the membranes of *E. coli*, but the structure of this reaction product remains to be investigated. (C) 1999 Elsevier Science Ltd. All rights reserved.

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on STN DUPLICATE 14

AB Chemical syntheses of inner core determinants have been performed to provide defined artificial antigens (BSA-glycoconjugates) for characterization of monoclonal antibodies directed against important epitopes residing in the inner core of **bacterial** lipopolysaccharides. Efficient block **synthesis** of Kdo **oligosaccharides** has been employed to prepare the allyl glycoside [5] corresponding to the *Chlamydia*-specific Kdo trisaccharide epitope, to be used in crystallization and NMR (transfer NOe) experiments. Human pathogenic strains of *Pseudomonas aeruginosa* of RNA group I contain a highly phosphorylated heptose region with a 7-O-carbamoyl L-glycero-D-mannoheptose moiety which may be exploited as immunochemical marker for pathogenic *Pseudomonas* species. The 7-O-carbamoyl-substituted heptoside [12] as well as the disaccharides 7-O-carbamoyl-L-gro-alpha-D-manHepp-(1-->3)-L-gro-alpha-D-manHepp-(1-->O-Allyl) [23] and alpha-D-GalpNAc-(1-->3)-L-gro-alpha-D-manHepp-(1-->3)-L-gro-alpha-D-manHepp-(1-->O-Allyl) [30] were synthesized via regioselective formation of a 6',7'-O-carbonate group followed by ring opening with NH₃/NH₄HCO₃ to give the 7-O-carbamate in high yields. Finally, glycosides of the Kdo-isosteric D-glycero-D-talo-2-octulosonic acid (Ko) occurring in *Acinetobacter* spp. have been prepared via intermediate orthoester formation and TMSO-triflate-catalyzed rearrangement into alpha-ketosides. Coupling with a Kdo bromide donor and deblocking afforded the disaccharide alpha-Ko-(2-->4)-alpha-Ko-(2-->O-Allyl) [43].

L49 ANSWER 31 OF 207 MEDLINE on STN DUPLICATE 15

AB Many human pathogens initiate disease by utilizing their microbial adhesin proteins to attach to glycoconjugates on host cell mucosal surfaces. Soluble oligosaccharides of identical or similar structure to these naturally occurring ligands can both prevent bacterial attachment as well as mediate the release of attached bacteria. Since it has not been possible to isolate large quantities of these compounds, we have developed enzyme-based technologies to synthesize several relevant human oligosaccharides. Using cloned **bacterial** glycosyltransferases, we can **synthesize** several hundred grams of these **oligosaccharides** at a time. The availability of these large quantities will allow these compounds to be tested as anti-adhesive pharmaceutical agents as well as lead to expanded practical applications.

L49 ANSWER 32 OF 207 MEDLINE on STN DUPLICATE 16

AB Synthesis of CMP-deaminoneuraminic acid (CMP-beta-D-Kdn) and its enzymatic transfer reaction using bacterial alpha-(2-->6)-sialyltransferase were

examined. CMP-beta-D-Kdn was prepared from methyl 4,5,7,8,9-penta-O-acetyl-3-deoxy-D-glycero-beta-D-galacto-2- nonulopyranosonate (2) in 24% overall yield. Enzymatic synthesis of Kdn oligosaccharide with CMP-beta-D-Kdn (10.2 mumol), methyl beta-D-lactosaminide (7, 8.1 mumol) and purified sialyltransferase (80 munits) afforded Kdn-alpha-(2-->6)-Gal-beta-(1-->4)-GlcNAc-beta-1-OME in 77% yield.

L49 ANSWER 36 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A review with 26 refs. on problems and related strategies of **oligosaccharide synthesis** using **microbial** enzymes with subdivision headings: general strategy and problems on **oligosaccharide synthesis**, enzymes for the **synthesis** (including **microbial** glycosyltransferase, glycosidase, phosphorylase), fashioning of the **microbial** enzyme **synthesized oligosaccharide** discussed on the enzyme sources, substrate specificity, side reaction, and enzyme technol. to improve oligosaccharide variety, substrate-inversion-rate and purity of oligosaccharide products.

L49 ANSWER 39 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

AB A method for expressing a glycosyltransferase in a host cell (Escherichia coli) consists of obtaining a host cell substantially lacking a protease that cleaves proteins between 2 consecutive positively charged amino acids, then introducing a nucleic acid, which encodes the enzyme into the cell, incubating the cells under expression conditions, or, introducing a nucleic acid which encodes a glycosyltransferase, where the DNA sequence (specified) lacks at least one occurrence of 2 adjacent codons for positively charged amino acids that are normally present in the enzyme, in to the host cell, are new. Also claimed are: a composition containing the enzyme, obtained using the method mentioned above; a recombinant nucleic acid (N1) with a sequence (specified) as mentioned above; an expression cassette, containing N1 operably linked to a promoter functional in the host cell, containing N1; and a method to transfer a monosaccharide between substrates, which involves, a reaction medium containing glycosyltransferase, a donor and acceptor substrate and a soluble divalent metal cation. The enzyme helps in vitro production of therapeutic oligosaccharides. (33pp)

L49 ANSWER 40 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

AB A gene is claimed which encodes a beta-galactoside-alpha-2,6-sialyltransferase (I) produced by Photobacterium damsela JT0160 (FERM BP-4900). The DNA sequence of the gene is disclosed. Also claimed are: DNA derived from the gene by addition, deletion or substitution of one or more bases; DNA encoding a signal peptide (the 1st 15 residues of the enzyme sequence); vectors containing the DNA; and production of recombinant (I) or its fragments by culture of a host cell transformed with the vector. (I) is not homologous with known animal sialyltransferases and differs from them in binding to cell membrane at its C-terminal region. Expression of modified gene lacking the portion encoding the C-terminus of (I) produces a soluble form of the enzyme. (I) catalyzes the incorporation of NeuAc in the 6-position of galactose residues of oligosaccharide chains, and can be obtained readily in high yield by **microbial** culture for use in specific **synthesis** of sialylated **oligosaccharides**. In an example, vector plasmid pEBST is constructed to contain the P. damsela (I) gene and expressed in Escherichia coli MV1184. Clone C2 is obtained, which produces 240 U/l (I) activity in the medium. (60pp)

L49 ANSWER 46 OF 207 MEDLINE on STN . DUPLICATE 21

AB A large-scale production system of uridine 5'-diphospho-galactose (UDP-Gal) has been established by the combination of recombinant Escherichia coli and Corynebacterium ammoniagenes. Recombinant E. coli that overexpress the UDP-Gal biosynthetic genes galT, galK, and galU were generated. C. ammoniagenes contribute the production of uridine

triphosphate (UTP), a substrate for UDP-Gal biosynthesis, from orotic acid, an inexpensive precursor of UTP. UDP-Gal accumulated to 72 mM (44 g/L) after a 21 h reaction starting with orotic acid and galactose. When *E. coli* cells that expressed the α 1,4-galactosyltransferase gene of *Neisseria gonorrhoeae* were coupled with this UDP-Gal production system, 372 mM (188 g/L) globotriose (Gal α 1-4Gal β 1-4Glc), a trisaccharide portion of verotoxin receptor, was produced after a 36 h reaction starting with orotic acid, galactose, and lactose. No oligosaccharide by-products were observed in the reaction mixture. The production of globotriose was several times higher than that of UDP-Gal. The strategy of producing sugar nucleotides by combining metabolically engineered recombinant *E. coli* with a nucleoside 5'-triphosphate producing **microorganism**, and the concept of **producing oligosaccharides** by coupling sugar nucleotide **production** systems with glycosyltransferases, can be applied to the manufacture of other sugar nucleotides and oligosaccharides.

L49 ANSWER 55 OF 207 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN DUPLICATE 26

AB In this article, **syntheses of bacterial oligosaccharides** containing additional synthetic challenges are presented. In the first part, syntheses of L-glycero-D-manno-heptopyranosyl-containing oligosaccharides are reported. Synthesis of the heptose trisaccharide structures from the core region of lipopolysaccharides from *Salmonella* and *Haemophilus* bacteria are described together with larger fragments containing hexoses as well. In the second part, development of reactive beta-selective glucuronic acid thioglycoside donors is presented. These donors, promoted by DMTST, are used to prepare disaccharide structures corresponding to the repeating unit of the capsular polysaccharide from *Streptococcus pneumoniae* type 3 and to parts of the capsular polysaccharide of *Cryptococcus neoformans*. In the third and last part, stereoselective synthesis of α - and β -D-fructofuranosides using thioglycoside donors are discussed. With participating benzoyl groups and DMTST as promoter, excellent yields of α -linked fructofuranosyl disaccharides are obtained. Application of the internal aglycon delivery approach, with the aglycon tethered to the β -face of the fructofuranosyl thioglycoside donor as part of a 3-O-p-methoxybenzylidene acetal, produced stereospecifically high yields of β -linked fructofuranosyl disaccharides, inter alia, structures from the *Haemophilus influenzae* type e capsular polysaccharide, after activation of the tethered intermediates with DMTST.

L49 ANSWER 58 OF 207 MEDLINE on STN DUPLICATE 27

AB Cultivation of *Escherichia coli* harbouring heterologous genes of **oligosaccharide synthesis** is presented as a new method for preparing large quantities of high-value oligosaccharides. To test the feasibility of this method, we successfully produced in high yield (up to 2.5 g/L) penta-N-acetyl-chitopentaose (1) and its deacetylated derivative tetra-N-acetyl-chitopentaose (2) by cultivating at high density cells of *E. coli* expressing *nodC* or *nodBC* genes (*nodC* and *nodB* encode for chitooligosaccharide synthase and chitooligosaccharide N-deacetylase, respectively). These two products were easily purified by charcoal adsorption and ion-exchange chromatography. One important application of compound 2 could be its utilisation as a precursor for the preparation of synthetic nodulation factors by chemical acylation.

L49 ANSWER 95 OF 207 HCAPLUS COPYRIGHT 2005 ACS on STN

AB Recombinant *Escherichia coli* with a porous cell wall and containing periplasmic α -1,2-mannosyltransferase was used in the mannosylation of a series of D-mannose containing acceptors. Yields in the α -1,2-mannosylation step of the acceptor mannose moiety ranged 42-75% for D-mannose, Me D-mannoside, mannosylthreonine, and a mannosyltri-peptide.

=> d ab 166

L49 ANSWER 166 OF 207 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
AB Current commercial applications of polysaccharides are reviewed. Economic
aspects are discussed, including current markets, market trends, industry
realignment, prospects and applications. New polymers are described,
including cellulose (liquid crystal products, cellulose, cellulose
acetate, drug release and cosmetic products, coating and thickening
products, superabsorbents and food additives); starch products
(surfactants, plastics additives and new polymers), hyaluronic acid,
alginate (from Laminaria hyperborea), chitin, chitosan, xanthan gum (from
Xanthomonas campestris), gellan gum, welan gum, rhamosan gum,
polysaccharides from methylotrophic **bacteria** and
oligosaccharide products (e.g. cyclodextrin). New
polysaccharide applications are examined, including pharmaceutical
products (vaccine development, drug delivery, antitumor products from
bacteria, antithrombogenic products, anti-adhesive drugs); diagnostic
products (ELISA, biosensor products, imaging agents); membranes;
chromatography; two-phase systems; immobilization; extractive
fermentation, sorption, metal chelators, surfactants and drag reducing
agents. (167 ref)

=> fil .bec

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.19	-2.19

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24446 PRY<=2000
(PRY<=2000)
96046 PY>=2001
(PY>=2001)

L50 2 L28 AND WO/PC AND PRY<=2000 AND PY>=2001

FILE 'HCAPLUS'

217198 WO/PC

447460 PRY<=2000
4151632 PY>=2001
L51 3 L31 AND WO/PC AND PRY<=2000 AND PY>=2001

FILE 'WPIDS'

461817 WO/PC
1453590 PRY<=2000
(PRY<=2000)
3201727 PY>=2001
(PY>=2001)
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TOTAL FOR ALL FILES

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L54 5 DUP REM L53 (0 DUPLICATES REMOVED)

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L54 ANSWER 1 OF 5 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Novel crystal for identifying ligands that modulate glycosyltransferase activity comprises ligand binding pocket of retaining glycosyltransferase enzyme and optionally donor and/or acceptor molecule;
recombinant protein production purification and crystallization useful for **bacterium** infection therapy and lipo-
oligosaccharide production
AU WITHERS S G; WAKARCHUK W W; STRYNADKA N C J; DIECKELMANN M; LY H; PERSSON K
AN 2003-01129 BIOTECHDS
PI WO 2002048320 20 Jun 2002

L54 ANSWER 2 OF 5 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Bacillus subtilis-originated uridine diphosphate glucose 4-epimerase, for converting uridine diphosphate N-acetylglucosamine into uridine diphosphate N-acetylgalactosamine;
for use in industry
AU Hamamoto T; Noguchi T
AN 2001-11846 BIOTECHDS
PI WO 2001038555 31 May 2001

L54 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Codon usage modified α 2,3-sialyltransferase gene for recombinant expression and complex sialic acid-containing carbohydrates production
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
IN Endo, Tetsuo; Koizumi, Satoshi
AN 2001:763176 HCAPLUS
DN 135:315321

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077314	A1	20011018	WO 2001-JP3110	20010411 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

L54 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Expression of Bacteroides α -1,2-fucosyltransferase in E. coli to
produce fucose-containing carbohydrate complex
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2

IN Endo, Tetsuo; Koizumi, Satoshi
AN 2001:763175 HCAPLUS
DN 135:328119

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001077313	A1	20011018	WO 2001-JP3109	20010411 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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	AU 2001046894	A5	20011023	AU 2001-46894	20010411 <--
	EP 1275714	A1	20030115	EP 2001-919886	20010411 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004058418	A1	20040325	US 2003-257332	20030306 <--

L54 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Galactomannan Oligosaccharide and procedure for their production as well
as their use

SO Ger. Offen., 12 pp.
CODEN: GWXXBX

IN Klingenberg, Michael; Kunz, Markwart; Ludwig, Eva; Munir, Mohammad; Rittig,
Frank; Vogel, Manfred
AN 2001:449805 HCAPLUS
DN 135:45276

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19961182	A1	20010621	DE 1999-19961182	19991218 <--
	CA 2394640	AA	20010621	CA 2000-2394640	20001212 <--
	WO 2001044489	A2	20010621	WO 2000-EP12574	20001212 <--
	WO 2001044489	A3	20020214		
	W: AU, CA, IL, JP, KR, MX, RU, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1303632	A2	20030423	EP 2000-991171	20001212 <--
	EP 1303632	B1	20041006		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	JP 2003516757	T2	20030520	JP 2001-545566	20001212 <--
	AT 278799	E	20041015	AT 2000-991171	20001212 <--
	US 2003162300	A1	20030828	US 2002-168044	20021219 <--

=> log y

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